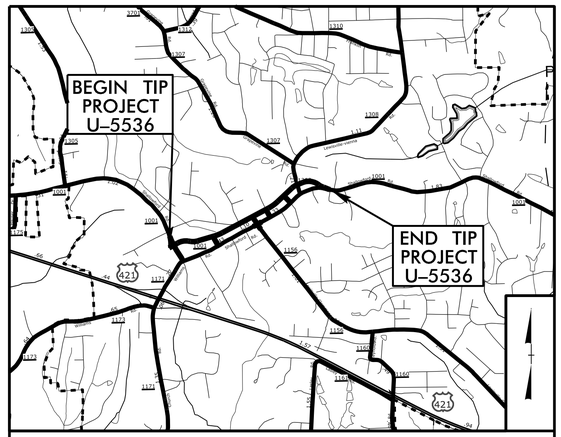
09/08/99

TIP PROJECT: U-5536

CONTRACT: C204980

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



VICINITY MAP N.T.S.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

FORSYTH COUNTY

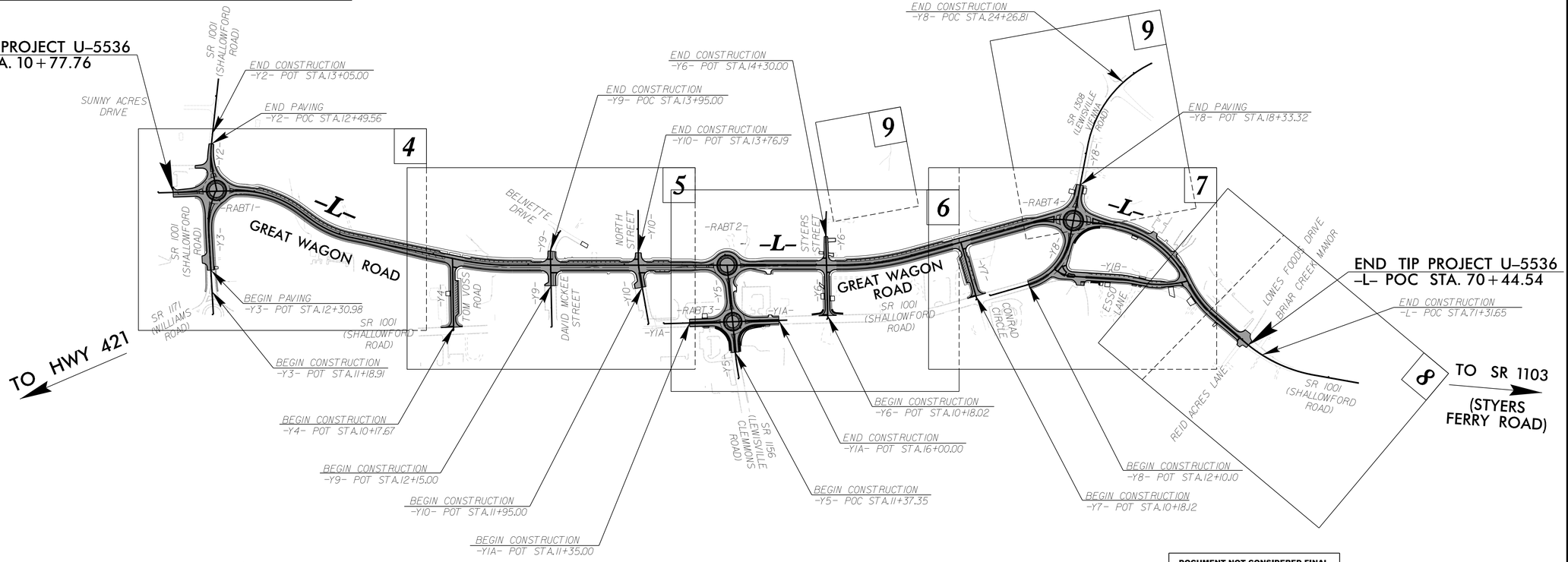
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5536	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
44108.1.2	N/A	P.E.
44108.2.1	N/A	R/W
44108.2.2	N/A	UTIL
44108.3.1	N/A	CONST.

LOCATION: ***PROPOSED GREAT WAGON ROAD (NEW ROUTE) FROM SR 1001 (SHALLOWFORD ROAD) TO SR 1308 (LEWISVILLE–VIENNA ROAD) IN LEWISVILLE***

TYPE OF WORK: ***GRADING, DRAINAGE, PAVING, AND WALLS***

NAD 83/NA 2011



THIS PROJECT IS WITHIN THE TOWN OF LEWISVILLE.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2024 = N/A
ADT 2040 = 8,200
K = 12 %
D = 60 %
T = 3 %
V = 40 MPH
TTST = 1 % DUALS = 2 %
FUNC CLASS = MINOR COLLECTOR
DIVISION TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5536 = 1.130 MILES

TOTAL LENGTH TIP PROJECT U-5536 = 1.130 MILES

Prepared In the Office of:

CDM Smith

CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC COA No. F-1255

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 18, 2022

LETTING DATE:
FEBRUARY 18, 2025

DAVID Z. KEISER, P.E.
PROJECT ENGINEER

ADAM M. CONRAD, P.E.
PROJECT DESIGN ENGINEER

CONNIE K. JAMES, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL 12/19/2024 SEAL 33246 ENGINEER LINDA M. JOHNS

DocuSigned by: Linda Johns
34348B702D704BD
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL 12/19/2024 SEAL 033400 ENGINEER DAVID Z. KEISER

DocuSigned by: David Z. Keiser
5FE5D82D2D5B4D4
SIGNATURE: P.E.

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-5536	1-A

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033400 — 8/19/2024 — DAVID ZECKOSER — 5FFD0B2025F94B8...

CDM Smith
CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3226
NC COA No. F-1255

INDEX OF SHEETS

EFF. 01-16-2024
REV.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 7 - CONCRETE PAVEMENTS AND SHOULDERS	
700.01	Concrete Pavement Joints - Construction and Contraction Joints
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	Concrete Drop Inlet - 12" thru 30" Pipe
840.15	Brick Drop Inlet - 12" thru 30" Pipe
840.16	Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.34	Traffic Bearing Junction Box - for Use with Pipes 42" and Under
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.03	Driveway Turnout - Drop Curb Type
848.04	Street Turnout
848.06	Curb Ramp
848.07	Concrete Sidepath/Shared Use Path/Greenway Construction
852.01	Concrete Islands
852.02	Concrete Mountable Median - for Use with Rigid or Flexible Pavement
852.06	Method for Placement of Drop Inlets in Concrete Islands
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

GENERAL NOTES:

2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE:

DUKE ENERGY
THE CITY OF WINSTON SALEM
PIEDMONT NATURAL GAS
AT&T
WINDSTREAM
YADTEL
SPECTRUM
VERIZON

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

CURB RAMPS:

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.06.

SYSTIME
I:\SE\U5536\Rdy_psh_1A.dgn
USER:DANGRAM

9/10/2021

PROJECT REFERENCE NO.	SHEET NO.
U-5536	1-B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin (EIP)
- Computed Property Corner
- Existing Concrete Monument (ECM)
- Parcel/Sequence Number
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary
- Proposed Wetland Boundary
- Existing Endangered Animal Boundary
- Existing Endangered Plant Boundary
- Existing Historic Property Boundary
- Known Contamination Area: Soil
- Potential Contamination Area: Soil
- Known Contamination Area: Water
- Potential Contamination Area: Water
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign
- Well
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream
- Buffer Zone 1
- Buffer Zone 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch
- False Sump

RAILROADS:

- Standard Gauge
- RR Signal Milepost
- Switch
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Secondary Horiz and Vert Control Point
- Vertical Benchmark
- Existing Right of Way Monument
- Proposed Right of Way Monument (Rebar and Cap)
- Proposed Right of Way Monument (Concrete)
- Existing Permanent Easement Monument
- Proposed Permanent Easement Monument (Rebar and Cap)
- Existing C/A Monument
- Proposed C/A Monument (Rebar and Cap)
- Proposed C/A Monument (Concrete)
- Existing Right of Way Line
- Proposed Right of Way Line
- Existing Control of Access Line
- Proposed Control of Access Line
- Proposed ROW and CA Line
- Existing Easement Line
- Proposed Temporary Construction Easement
- Proposed Temporary Drainage Easement
- Proposed Permanent Drainage Easement
- Proposed Permanent Drainage/Utility Easement
- Proposed Permanent Utility Easement
- Proposed Temporary Utility Easement
- Proposed Aerial Utility Easement

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut
- Proposed Slope Stakes Fill
- Proposed Curb Ramp
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert
- Bridge Wing Wall, Head Wall and End Wall

MINOR:

- Head and End Wall
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB
- Paved Ditch Gutter
- Storm Sewer Manhole
- Storm Sewer

UTILITIES:

** SUE – Subsurface Utility Engineering*
LOS – Level of Service – A,B,C or D (Accuracy)

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H–Frame Pole
- U/G Power Line Test Hole (SUE – LOS A)*
- U/G Power Line (SUE – LOS B)*
- U/G Power Line (SUE – LOS C)*
- U/G Power Line (SUE – LOS D)*

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole
- Telephone Pedestal
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole
- U/G Telephone Test Hole (SUE – LOS A)*
- U/G Telephone Cable (SUE – LOS B)*
- U/G Telephone Cable (SUE – LOS C)*
- U/G Telephone Cable (SUE – LOS D)*
- U/G Telephone Conduit (SUE – LOS B)*
- U/G Telephone Conduit (SUE – LOS C)*
- U/G Telephone Conduit (SUE – LOS D)*
- U/G Fiber Optics Cable (SUE – LOS B)*
- U/G Fiber Optics Cable (SUE – LOS C)*
- U/G Fiber Optics Cable (SUE – LOS D)*

WATER:

- Water Manhole
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line Test Hole (SUE – LOS A)*
- U/G Water Line (SUE – LOS B)*
- U/G Water Line (SUE – LOS C)*
- U/G Water Line (SUE – LOS D)*
- Above Ground Water Line

TV:

- TV Pedestal
- TV Tower
- U/G TV Cable Hand Hole
- U/G TV Test Hole (SUE – LOS A)*
- U/G TV Cable (SUE – LOS B)*
- U/G TV Cable (SUE – LOS C)*
- U/G TV Cable (SUE – LOS D)*
- U/G Fiber Optic Cable (SUE – LOS B)*
- U/G Fiber Optic Cable (SUE – LOS C)*
- U/G Fiber Optic Cable (SUE – LOS D)*

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line Test Hole (SUE – LOS A)*
- U/G Gas Line (SUE – LOS B)*
- U/G Gas Line (SUE – LOS C)*
- U/G Gas Line (SUE – LOS D)*
- Above Ground Gas Line

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line
- Above Ground Sanitary Sewer
- SS Force Main Line Test Hole (SUE – LOS A)*
- SS Force Main Line (SUE – LOS B)*
- SS Force Main Line (SUE – LOS C)*
- SS Force Main Line (SUE – LOS D)*

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box
- Utility Unknown U/G Line (SUE – LOS B)*
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc.
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

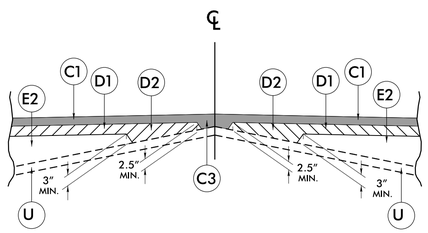
6/2/99

PAVEMENT SCHEDULE

(FINAL PAVEMENT DESIGN)

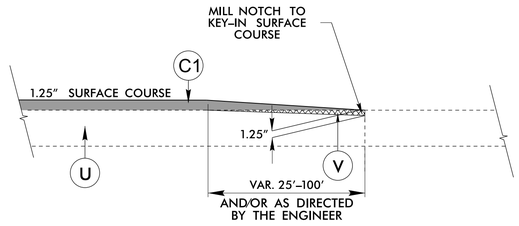
A1	8″ STAMPED CONCRETE TRUCK APRON
A2	12″ PORTLAND CEMENT CONCRETE PAVEMENT
C1	PROP. APPROX. 1.25″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1″ DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1.0″ IN DEPTH OR GREATER THAN 1.5″ IN DEPTH.
D1	PROP. APPROX. 4″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5″ IN DEPTH OR GREATER THAN 4.0″ IN DEPTH.
E1	PROP. APPROX. 4″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3.0″ IN DEPTH OR GREATER THAN 5.5″ IN DEPTH.
R1	2′-6″ CURB AND GUTTER
R2	1′-6″ CURB AND GUTTER
R3	8″ X 18″ CONCRETE CURB
R4	MONOLITHIC CONCRETE ISLAND (KEYED-IN)
R5	MONOLITHIC CONCRETE MOUNTABLE ISLAND MEDIAN
S	4″ CONCRETE SIDEWALK
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	INCIDENTAL MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

NOTE: ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

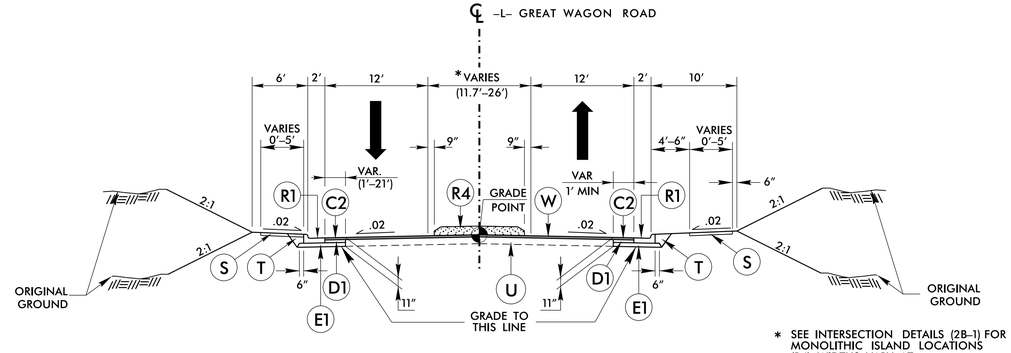


Detail Showing Method of Wedging – W

MILLING DETAIL
INCIDENTAL MILLING AT BEGIN/END FOR TIE–INS



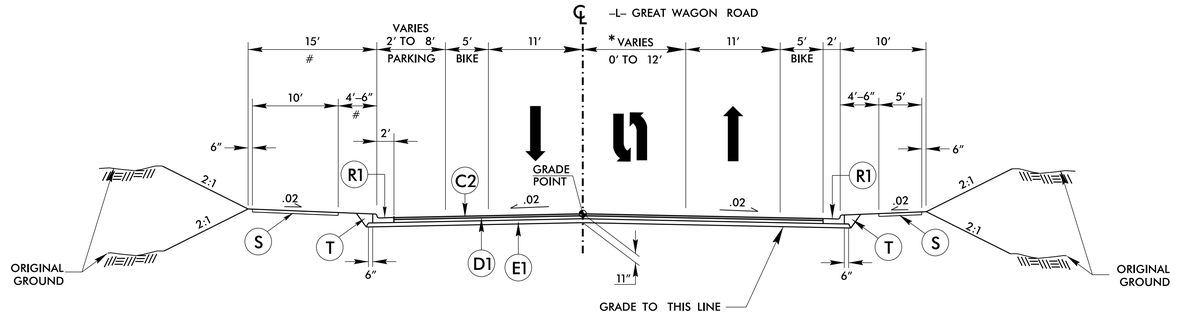
–L– STA. 10+77.76	TO STA. 11+02.76
–L– STA. 70+19.54	TO STA. 70+44.54
–Y1A– STA. 11+35.00	TO STA. 11+60.00
–Y1A– STA. 15+75.00	TO STA. 16+00.00
–Y2– STA. 12+24.56	TO STA. 12+49.56
–Y3– STA. 12+30.98	TO STA. 12+55.98
–Y5– STA. 11+37.35	TO STA. 11+62.35
–Y6– STA. 10+18.02	TO STA. 10+43.02
–Y6– STA. 14+05.00	TO STA. 14+30.00
–Y8– STA. 12+10.10	TO STA. 12+35.10
–Y8– STA. 18+08.32	TO STA. 18+33.32
–Y9– STA. 12+15.00	TO STA. 12+40.00
–Y9– STA. 13+70.00	TO STA. 13+95.00
–Y10– STA. 11+95.00	TO STA. 12+20.00
–Y10– STA. 13+51.19	TO STA. 13+76.19



* SEE INTERSECTION DETAILS (2B–1) FOR MONOLITHIC ISLAND LOCATIONS (R4). WIDTHS VARY AT ROUNDABOUT APPROACHES.

TYPICAL SECTION NO. 1

USE ON: –L– STA. 10+77.76 TO STA. 12+33.25



* SEE INTERSECTION DETAILS (2B–1) FOR MONOLITHIC ISLAND LOCATIONS (R4). WIDTHS VARY AT ROUNDABOUT APPROACHES.

\# VARIES STA. 25+29.61 TO STA 26+98.64

TYPICAL SECTION NO. 2

USE ON: –L– STA. 13+72.93 TO STA. 31+04.89

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2A-1

ROADWAY DESIGN ENGINEER

NORTH CAROLINA 12/19/2024 SEAL 033400 ENGINEER DocuSigned by: David Zickeiser 5FFD0B2D2F1A4A7...

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA 12/19/2024 SEAL 018969 ENGINEER DocuSigned by: Connie James 39F69EA3D9FB486...

CDM Smith

CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC COA No. F-1255

NC DEPARTMENT OF TRANSPORTATION
PAVEMENT MANAGEMENT UNIT
1593 MAIL SERVICE CENTER
RALEIGH, NC 27699-1593

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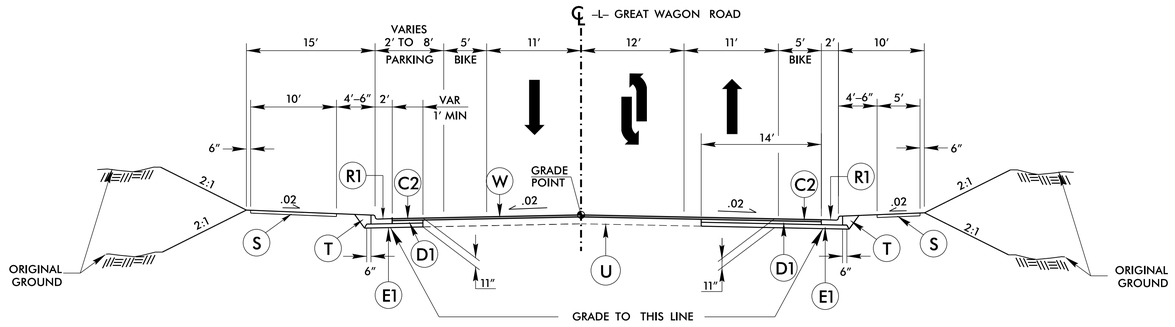
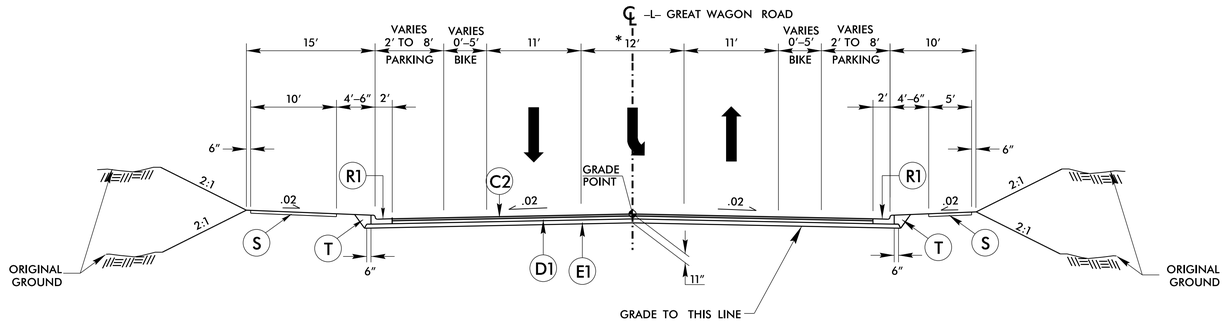
6/2/99



TYPICAL SECTION NO. 3

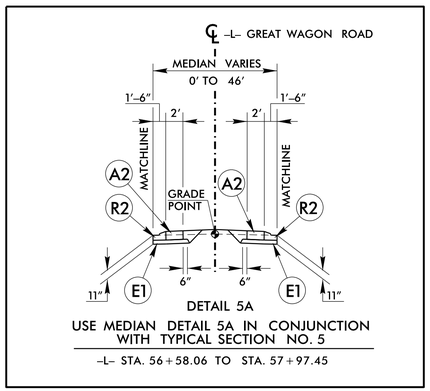
USE ON: –L– STA. 31+04.89 TO STA. 35+24.45



TYPICAL SECTION NO. 4

USE ON: –L– STA. 35+24.45 TO STA. 39+65.26

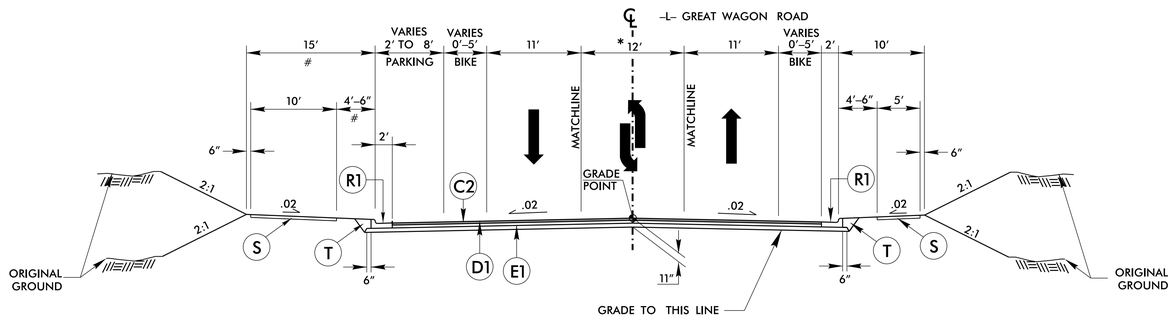
* SEE INTERSECTION DETAILS (2B–2) FOR MONOLITHIC ISLAND LOCATIONS (R4). WIDTHS VARY AT ROUNDABOUT APPROACHES.



DETAIL 5A

USE MEDIAN DETAIL 5A IN CONJUNCTION WITH TYPICAL SECTION NO. 5

–L– STA. 56+58.06 TO STA. 57+97.45



TYPICAL SECTION NO. 5

USE ON: –L– STA. 41+05.26 TO STA. 57+97.45

* SEE INTERSECTION DETAILS (2B–2 & 2B–4) FOR MONOLITHIC ISLAND LOCATIONS (R4). WIDTHS VARY AT ROUNDABOUT APPROACHES.

VARIES STA. 51+73.60 TO STA 53+86.87

WEDGING LIMITS 45+43.46 TO STA 45+62.41

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2A-2

ROADWAY DESIGN ENGINEER

NORTH CAROLINA 12/19/2024 SEAL 033400 ENGINEER DAVID ZACH KEISER

DocuSigned by: DAVID ZACH KEISER 5FFD0B2D25F1447...

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA 12/19/2024 SEAL 018969 ENGINEER CONNIE KAY JAMES

DocuSigned by: CONNIE KAY JAMES 39F69EA3D5F5466...

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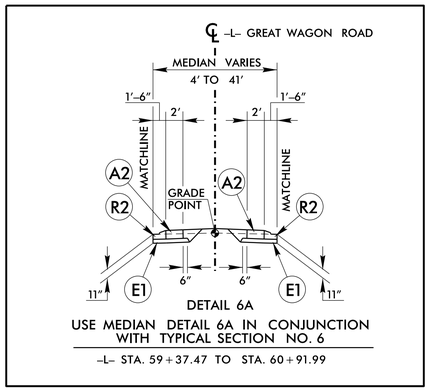
NC DEPARTMENT OF TRANSPORTATION
PAVEMENT MANAGEMENT UNIT
1593 MAIL SERVICE CENTER
RALEIGH, NC 27699-1593

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
A1	8″ TRUCK APRON
A2	12″ PORT. CEMENT CONC. PVMT.
C1	1.25″ S9.5B
C2	3″ S9.5B
C3	VAR. S9.5B
D1	4″ I19.0C
D2	VAR. I19.0C
E1	4″ B25.0C
E2	VAR. B25.0C
R1	2′-6″ C&G
R2	1′-6″ C&G
R3	8″ X 18″ CURB
R4	MONO. CONC. ISLAND (KEYED-IN)
R5	MONO. CONC. MOUNTABLE ISL.
S	4″ SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	INCIDENTAL MILLING
W	WEDGING

PAVEMENT EDGESLOPES 1:1 UNLESS NOTED OTHERWISE

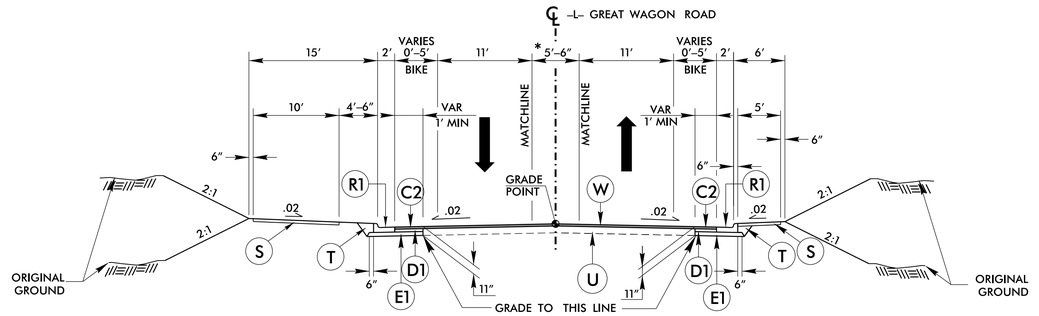
6/2/99



DETAIL 6A

USE MEDIAN DETAIL 6A IN CONJUNCTION WITH TYPICAL SECTION NO. 6

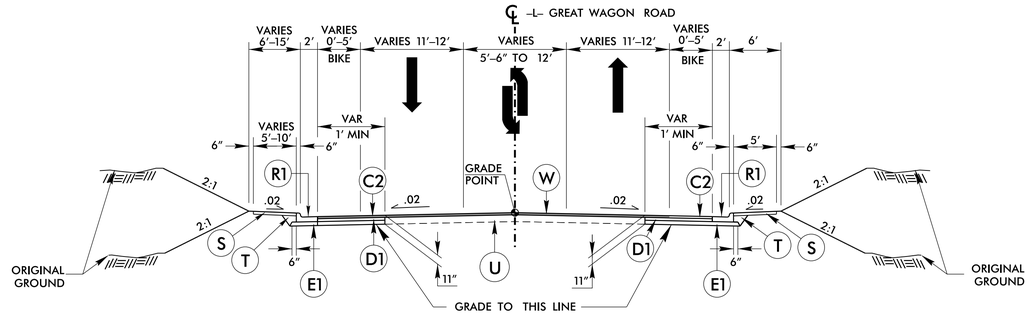
–L– STA. 59+37.47 TO STA. 60+91.99



* SEE INTERSECTION DETAILS (2B–4) FOR MONOLITHIC ISLAND LOCATIONS (R4). WIDTHS VARY AT ROUNDABOUT APPROACHES.

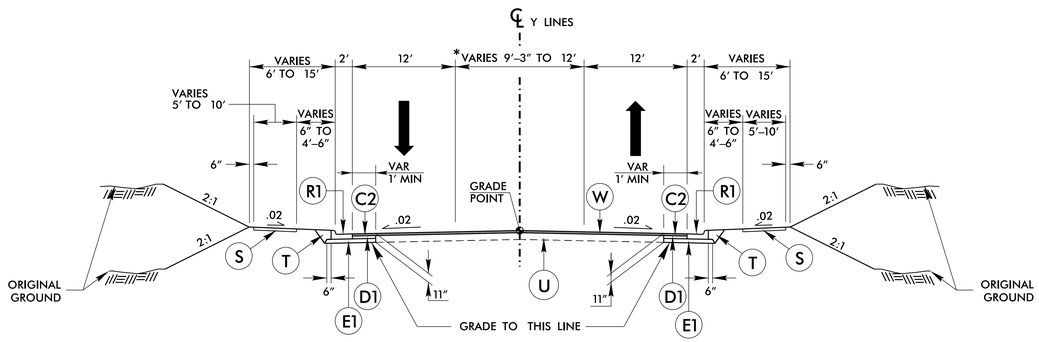
TYPICAL SECTION NO. 6

USE ON: –L– STA. 59+37.47 TO STA. 64+65.34



TYPICAL SECTION NO. 7

USE ON: –L– STA. 64+65.34 TO STA. 70+44.54



* SEE INTERSECTION DETAILS (2B–3 & 2B–4) FOR MONOLITHIC ISLAND LOCATIONS (R4). WIDTHS VARY AT ROUNDABOUT APPROACHES.

TYPICAL SECTION NO. 8

USE ON:
–Y1A– STA. 11+35.00 TO STA. 12+94.82
–Y1A– STA. 14+24.82 TO STA. 16+00.00
–Y3– STA. 12+30.98 TO STA. 15+82.80
–Y5– STA. 11+37.35 TO STA. 12+32.24
–Y8– STA. 12+10.10 TO STA. 15+74.89
–Y8– STA. 17+14.88 TO STA. 18+33.32

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2A-3

ROADWAY DESIGN ENGINEER

NORTH CAROLINA 12/19/2024 SEAL 033400 ENGINEER DAVID ZZ KEISER

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA 12/19/2024 SEAL 018969 ENGINEER CONNIE K JAMES

CDM Smith
CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC COA No. F-1255

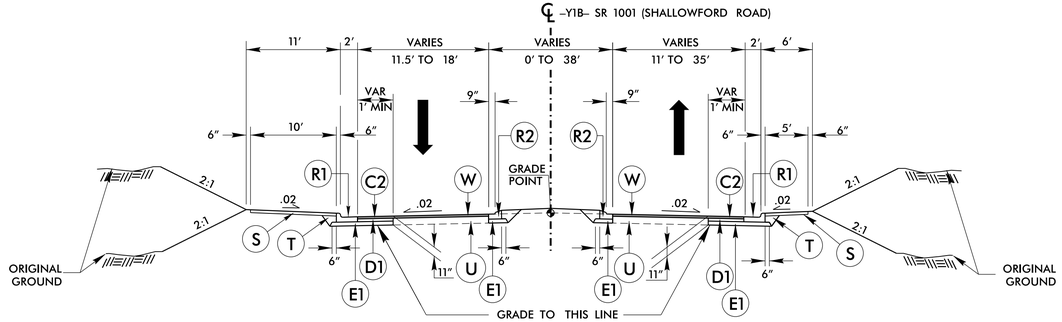
NC DEPARTMENT OF TRANSPORTATION
PAVEMENT MANAGEMENT UNIT
1593 MAIL SERVICE CENTER
RALEIGH, NC 27699-1593

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
A1	8″ TRUCK APRON
A2	12″ PORT. CEMENT CONC. PVMT.
C1	1.25″ S9.5B
C2	3″ S9.5B
C3	VAR. S9.5B
D1	4″ I19.0C
D2	VAR. I19.0C
E1	4″ B25.0C
E2	VAR. B25.0C
R1	2′-6″ C&G
R2	1′-6″ C&G
R3	8″ X 18″ CURB
R4	MONO. CONC. ISLAND (KEYED-IN)
R5	MONO. CONC. MOUNTABLE ISL.
S	4″ SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	INCIDENTAL MILLING
W	WEDGING

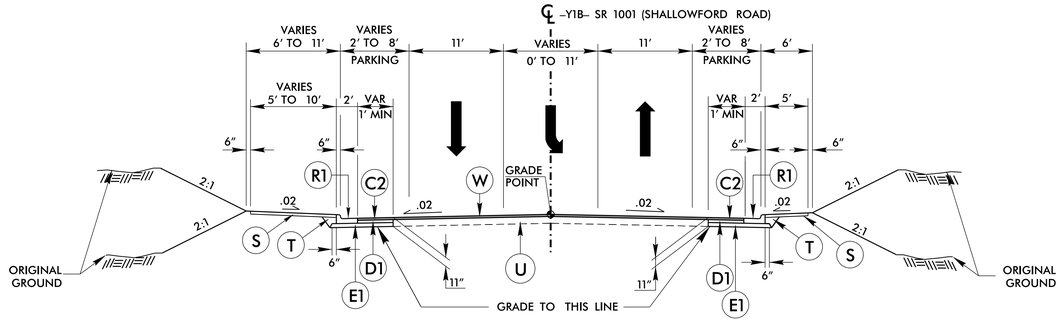
PAVEMENT EDGESLOPES 1:1 UNLESS NOTED OTHERWISE

6/2/99



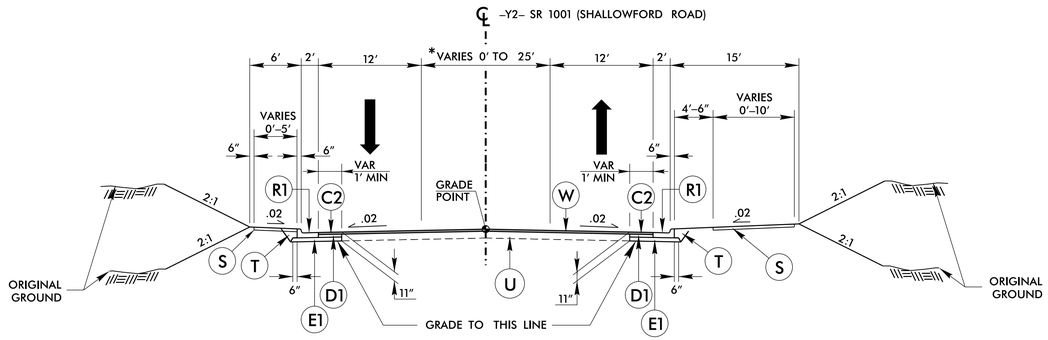
TYPICAL SECTION NO. 9

USE ON: –Y1B– STA. 10+18.23 TO STA. 11+16.07



TYPICAL SECTION NO. 10

USE ON: –Y1B– STA. 11+16.07 TO STA. 16+87.63



TYPICAL SECTION NO. 11

USE ON: –Y2– STA. 10+75.19 TO STA. 12+49.56

* SEE INTERSECTION DETAILS (2B–1) FOR MONOLITHIC ISLAND LOCATIONS (R4 & R5). WIDTHS VARY AT ROUNDABOUT APPROACHES.

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2A-4

ROADWAY DESIGN ENGINEER

NORTH CAROLINA SEAL 033400 ENGINEER
12/19/2024
Documents signed by: Daniel Zeiser
5FFD0B2D5F4A4A3...

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA SEAL 018969 ENGINEER
12/19/2024
Documents signed by: Connie James
39F69EA3D3F8486...

CDM Smith
CDM Smith Inc.
5400 Glenwood Avenue
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Raleigh, NC 27612-3228
NC COA No. F-1255

NC DEPARTMENT OF TRANSPORTATION
PAVEMENT MANAGEMENT UNIT
1593 MAIL SERVICE CENTER
RALEIGH, NC 27699-1593

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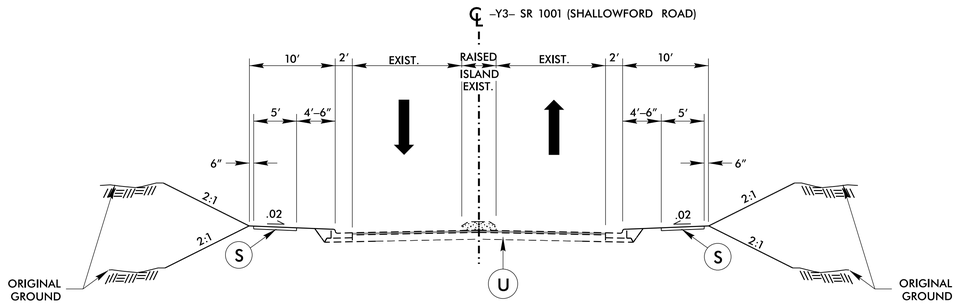
C2	3″ S9.5B
C3	VAR. S9.5B
D1	4″ I19.0C
D2	VAR. I19.0C
E1	4″ B25.0C
E2	VAR. B25.0C
R1	2′-6″ C&G
R2	1′-6″ C&G
R3	8″ X 18″ CURB
R4	MONO. CONC. ISLAND (KEYED-IN)
R5	MONO. CONC. MOUNTABLE ISL.
S	4″ SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	INCIDENTAL MILLING
W	WEDGING

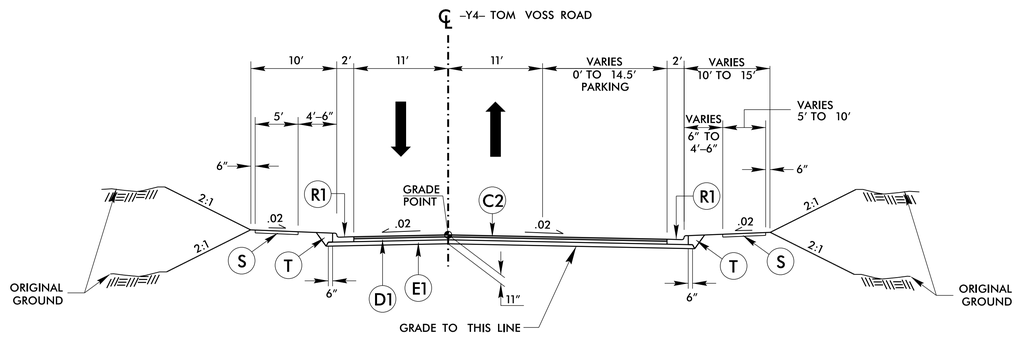
PAVEMENT EDGESLOPES 1:1 UNLESS NOTED OTHERWISE

6/2/99



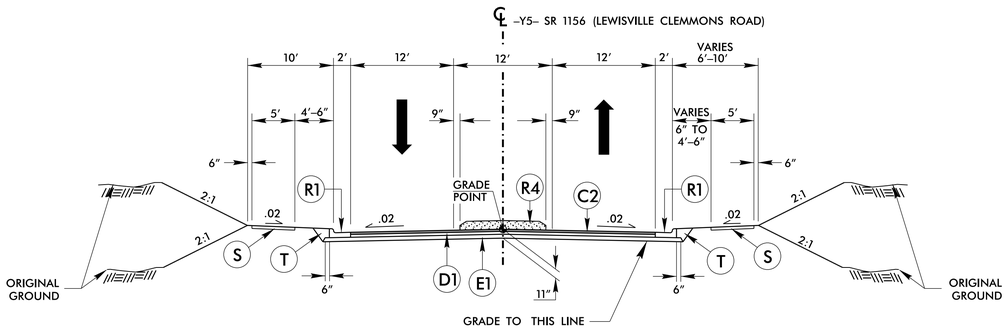
TYPICAL SECTION NO. 12

USE ON: –Y3– STA. 11+18.91 TO STA. 12+30.98



TYPICAL SECTION NO. 13

USE ON: –Y4– STA. 10+17.67 TO STA. 13+51.18



TYPICAL SECTION NO. 14

USE ON: –Y5– STA. 13+62.24 TO STA. 15+22.77

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2A-5

ROADWAY DESIGN ENGINEER

NORTH CAROLINA SEAL 033400 ENGINEER DAVID L. KEISER
12/19/2024
DocuSigned by: DAVID L. KEISER
5FFD0B2D2B1A4A1...

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA SEAL 018969 ENGINEER CONNIE K. JAMES
12/19/2024
DocuSigned by: CONNIE K. JAMES
39F69EA3D8F5468...

CDM Smith
CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC COA No. F-1255

NC DEPARTMENT OF TRANSPORTATION
PAVEMENT MANAGEMENT UNIT
1593 MAIL SERVICE CENTER
RALEIGH, NC 27699-1593

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PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
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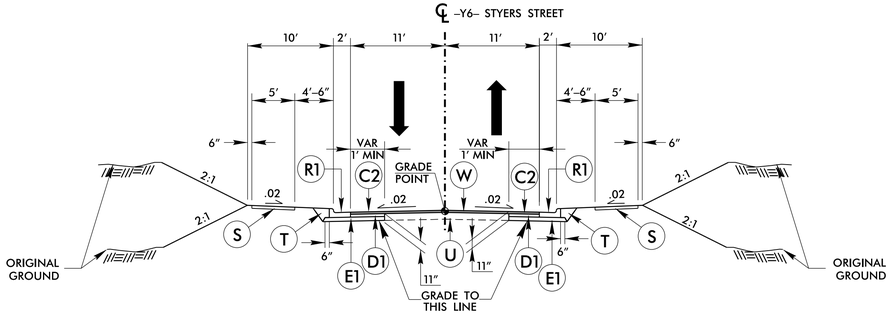
C2	3″ S9.5B
C3	VAR. S9.5B
D1	4″ I19.0C
D2	VAR. I19.0C
E1	4″ B25.0C
E2	VAR. B25.0C
R1	2′-6″ C&G
R2	1′-6″ C&G
R3	8″ X 18″ CURB
R4	MONO. CONC. ISLAND (KEYED-IN)
R5	MONO. CONC. MOUNTABLE ISL.
S	4″ SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	INCIDENTAL MILLING
W	WEDGING

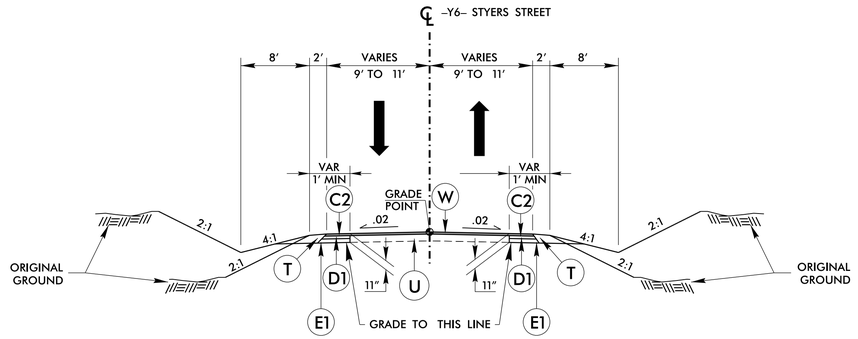
PAVEMENT EDGESLOPES 1:1 UNLESS NOTED OTHERWISE

6/2/99



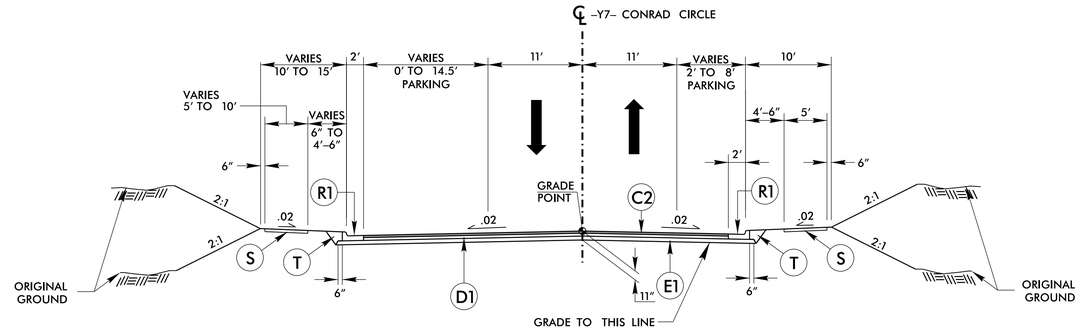
TYPICAL SECTION NO. 15

USE ON: –Y6– STA. 10+18.02 TO STA. 12+62.67



TYPICAL SECTION NO. 16

USE ON: –Y6– STA. 12+98.69 TO STA. 14+30.00



TYPICAL SECTION NO. 17

USE ON: –Y7– STA. 10+18.12 TO STA. 12+91.42

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2A-6

ROADWAY DESIGN ENGINEER

NORTH CAROLINA SEAL 033400 ENGINEER
12/19/2024
Approved by
DocuSigned by: David Zeiser
5FFD0B2205F1481...

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA SEAL 018969 ENGINEER
12/19/2024
Approved by
DocuSigned by: Connie K. James
39F6B5E7A3A2...

CDM Smith
CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC COA No. F-1255

NC DEPARTMENT OF TRANSPORTATION
PAVEMENT MANAGEMENT UNIT
1593 MAIL SERVICE CENTER
RALEIGH, NC 27699-1593

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PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
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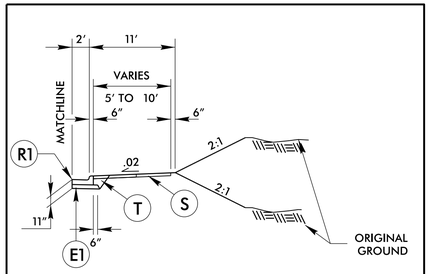
C3	VAR. S9.5B
D1	4″ I19.0C
D2	VAR. I19.0C
E1	4″ B25.0C
E2	VAR. B25.0C
R1	2′-6″ C&G
R2	1′-6″ C&G
R3	8″ X 18″ CURB
R4	MONO. CONC. ISLAND (KEYED-IN)
R5	MONO. CONC. MOUNTABLE ISL.
S	4″ SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	INCIDENTAL MILLING
W	WEDGING

PAVEMENT EDGESLOPES 1:1 UNLESS NOTED OTHERWISE

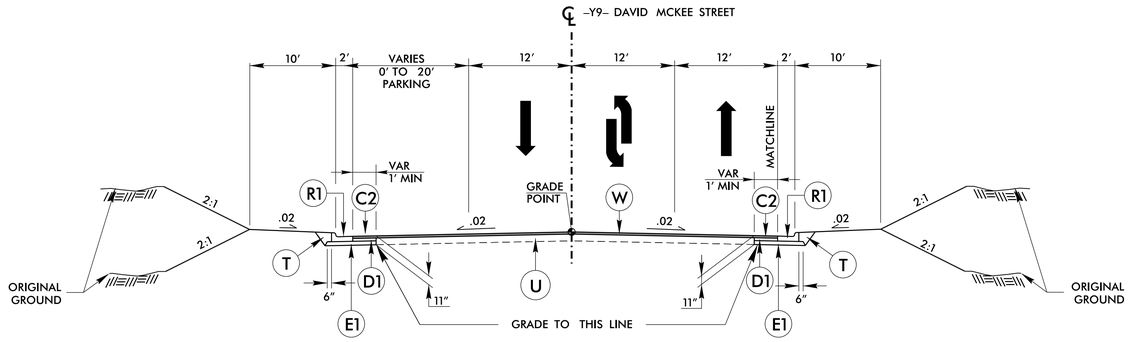
6/2/99



DETAIL 18A

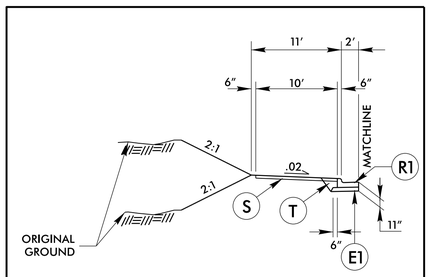
USE DETAIL 18A IN CONJUNCTION WITH TYPICAL SECTION NO. 18

–Y9– STA. 12+15.00 TO STA. 12+97.77 (RT)



TYPICAL SECTION NO. 18

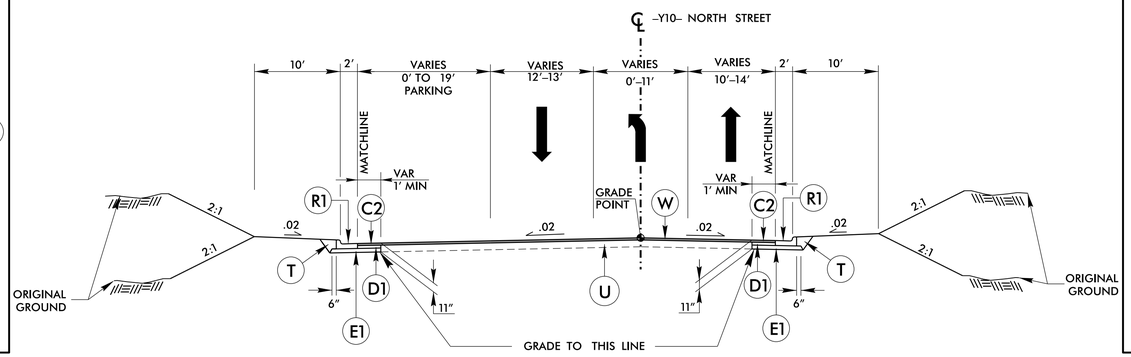
USE ON: –Y9– STA. 12+15.00 TO STA. 12+97.77
–Y9– STA. 13+33.78 TO STA. 13+95.00

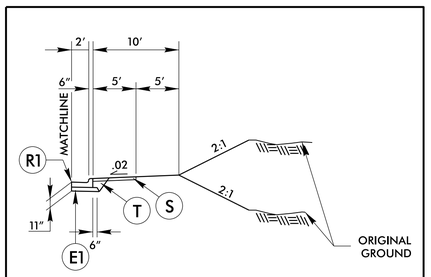


DETAIL 19A

USE DETAIL 19A IN CONJUNCTION WITH TYPICAL SECTION NO. 19

–Y10– STA. 11+95.00 TO STA. 12+87.42 (LT)





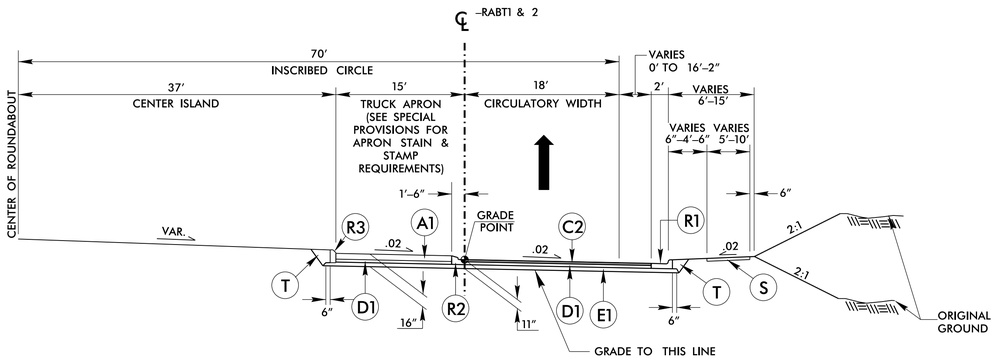
DETAIL 19B

USE DETAIL 19B IN CONJUNCTION WITH TYPICAL SECTION NO. 19

–Y10– STA. 11+95.00 TO STA. 12+87.42 (RT)

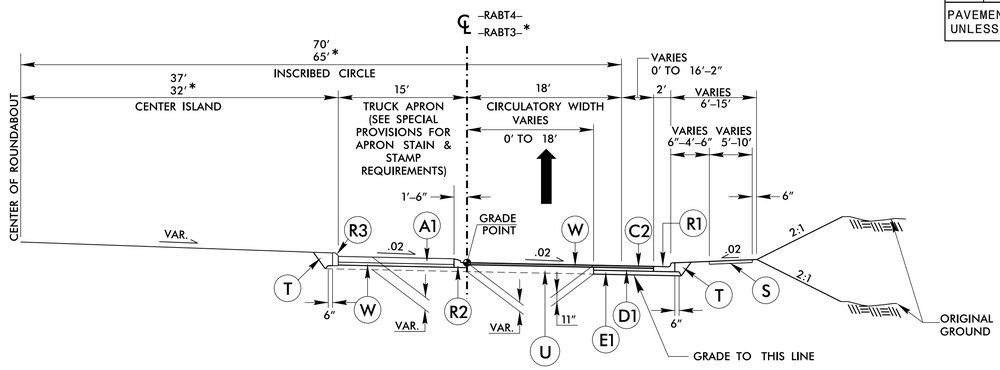
TYPICAL SECTION NO. 19

USE ON: –Y10– STA. 11+95.00 TO STA. 12+87.42
–Y10– STA. 13+23.62 TO STA. 13+76.19



TYPICAL SECTION NO. 20

USE ON: –RABT1– STA. 10+00.00 TO STA. 13+26.72
–RABT2– STA. 10+00.00 TO STA. 13+26.72



FOR WEDGING AND FULL DEPTH LIMITS, SEE CROSS SECTION SHEETS.

TYPICAL SECTION NO. 21

USE ON: –RABT3– STA. 10+00.00 TO STA. 12+95.30
–RABT4– STA. 10+00.00 TO STA. 13+26.72

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2A-7

ROADWAY DESIGN ENGINEER

NORTH CAROLINA SEAL 033400 ENGINEER DAVID ZLOTKEISER 12/19/2024

Signed by: DAVID ZLOTKEISER 5FFD0B2D25F54A1...

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA SEAL 018969 ENGINEER CORMAC JAMES 12/19/2024

Signed by: CORMAC JAMES 39F69EA3D9F84B8...

CDM Smith
CDM Smith Inc.
5400 Glenwood Avenue
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Raleigh, NC 27612-3228
NC COA No. F-1255

NC DEPARTMENT OF TRANSPORTATION
PAVEMENT MANAGEMENT UNIT
1593 MAIL SERVICE CENTER
RALEIGH, NC 27699-1593

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D2	VAR. I19.0C
E1	4″ B25.0C
E2	VAR. B25.0C
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R5	MONO. CONC. MOUNTABLE ISL.
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T	EARTH MATERIAL
U	EXIST. PAVEMENT
V	INCIDENTAL MILLING
W	WEDGING

PAVEMENT EDGESLOPES 1:1 UNLESS NOTED OTHERWISE

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2B-1

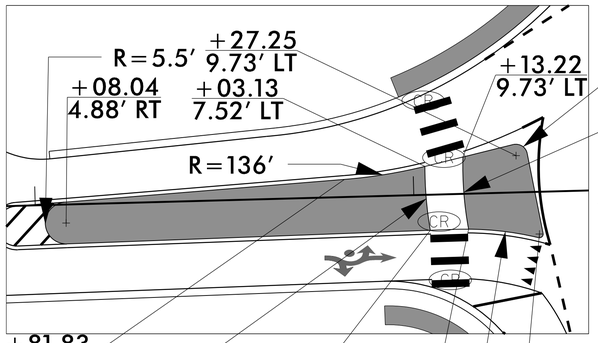
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROADWAY DESIGN ENGINEER
NORTH CAROLINA
5/19/2022
SEAL 033400
Signature
Digitally signed by Timothy Z. Huber
SFF0GE8E-F8E0-4E0E-B3E0-3E0E0E0E0E0E

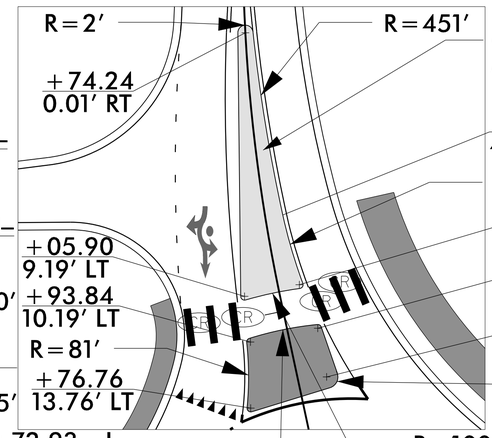
CDM Smith Inc
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3220
NC COA No. F-1255

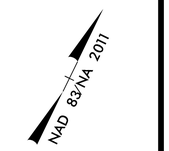
ROUNDABOUT I DETAIL

-L- ISLAND DETAIL



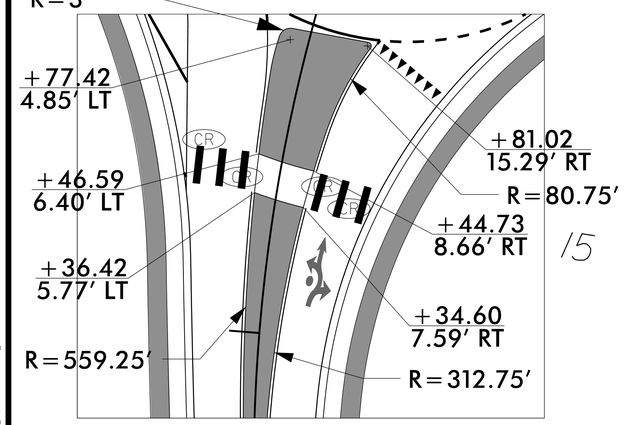
-Y2- ISLAND DETAIL



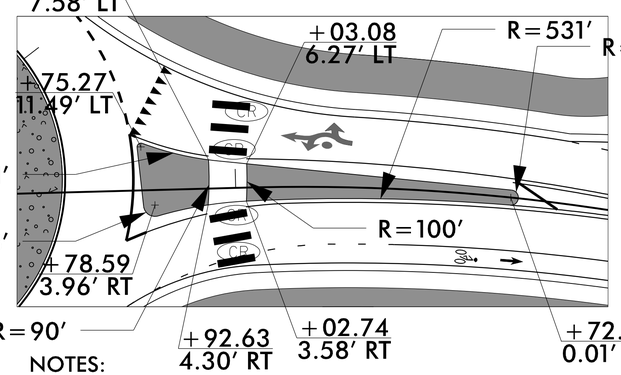


R = 40′
R = 30′
+31.51 –Y2–
51.06′ LT
+45.58 –Y2–
54.70′ LT
R = 3′
R = 90′
R = 75′
+76.88 –Y2–
39.16′ LT
EL. 938.34′
+75.19 –Y2–
40.64′ LT
EL. 938.41′
R = 50′
+88.19 –RABT1–
26.63′ RT
EL. 938.55′
+33.25 –L–
45.43′ LT
EL. 938.74′
+32.86
11.13′ RT
+64.11 –L–
16.74′ LT
EL. 938.81′
R = 120′
+04.48 –L–
12.19′ LT
EL. 937.90′
R = 24′
+91.41 –L–
22.51′ RT
EL. 939.55′
R = 40′
+80.70 –Y3–
48.66′ LT
EL. 941.04′
R = 200′
+16.11 –Y3–
19.81′ LT
EL. 941.29′
R = 3115′
+60.69 –Y3–
2.45′ LT
+46.21 –Y3–
15.00′ LT
EL. 941.55′
+84.72 –Y3–
16.48′ RT
EL. 941.35′
+45.59 –Y3–
2.30′ RT
+78.03 –Y2–
16.73′ LT
EL. 935.99′
+92.26 –Y2–
29.20′ LT
EL.937.78′
+28.28 –Y2–
17.69′ RT
EL.936.85′
R = 120′
+75.19 –Y2–
33.30′ RT
EL. 938.41′
+15.18 –RABT1–
18.00′ RT
EL. 938.80′
R = 70′
+08.34
–RABT1–
18.00′ RT
EL. 938.95′
+72.93 –L–
38.05′ LT
EL. 939.22′
R = 90′
R = 130′
+30.98 –L–
18.57′ LT
EL. 938.96′
+16.38 –L–
20.26′ LT
EL. 938.43′
+86.24 –L–
16.50′ LT
EL. 938.49′
+22.04 –L–
25.16′ LT
EL. 938.58′
R = 100′
R = 67′
+72.93 –L–
29.11′ RT
EL. 940.56′
+04.34 –L–
20.54′ RT
EL. 939.46′
+70.19 –L–
30.74′ RT
EL. 940.60′
R = 100′
+26.21 –RABT1–
18.00′ RT
EL. 940.84′
R = 70′
+14.94 –RABT1–
18.00′ RT
EL. 941.10′
+82.80 –Y3–
43.19′ RT
EL. 941.59′
R = 145′
D = 140′
18′
12′
11′
5′
EXIST.
-RABT1-
-L-
-Y2-
-Y3-
2′-6″ C&G
5′ CONC. SIDEWALK
10′ CONC. SIDEWALK
8″X18″ CURB
1′-6″ C&G
CR
.00
.01
.02
.03
.04

-Y3- ISLAND DETAIL



-L- ISLAND DETAIL



NOTES:

1) PROVIDE CUT OUT FOR SIGN INSTALLATION IN MONOLITHIC CONCRETE ISLAND. ENGINEER TO PROVIDE LOCATION OF FINAL SIGN PLACEMENT.
2) ALL ISLAND RADII ARE 1′ UNLESS OTHERWISE NOTED.

SEE SHEET 4 FOR PLAN VIEW

20′ 0′ 20′ 40′
GRAPHIC SCALE

LEGEND
CONCRETE SW/DRWY/ISLAND
CONCRETE TRUCK APRON

5/14/99

SYSTIME
U-5536_Rdy_psh_281.dgn
USER: CDMSMITH

5/14/99

ROUNDABOUT 2 DETAIL

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2B-2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL
12/19/2024
SEAL 033400
ENGINEER
DocuSigned by: Paul A. Keller
SIGNATURE

CDM Smith
CDM Smith Inc
5400 Glenwood Avenue Suite 400
Raleigh, NC 27612-3208
NC COA No. F-1255

NOTES:

1) PROVIDE CUT OUT FOR SIGN INSTALLATION IN MONOLITHIC CONCRETE ISLAND. ENGINEER TO PROVIDE LOCATION OF FINAL SIGN PLACEMENT.
2) ALL ISLAND RADII ARE 1' UNLESS OTHERWISE NOTED.

LEGEND
- CONCRETE SW/DRWY/ISLAND
- CONCRETE TRUCK APRON

NAD 83/NA 2011

-L- ISLAND DETAIL

+25.26 5.07' LT
R=66'
+07.39 7.33' LT
+11.08 5.31' RT
R=3'
+25.26 6.74' RT
+35.26 5.02' LT
+44.20 5.25' RT
+32.89 0.00' LT
R=5.25'
R=100.75'
+35.26 5.65' RT

+74.40 –RABT2– 18.00' RT EL. 965.39'
+32.01 –RABT2– 18.00' RT EL. 966.84'
+47.64 –L– 16.00' LT EL. 965.74'
+97.64 –L– 11.00' LT EL. 966.33'
+65.26 –L– 31.86' LT EL. 967.26'
R=120'
+05.26 –L– 32.41' LT EL. 965.20'
R=100'
+58.60 –L– 17.00' LT EL. 964.70'
+82.96 –L– 17.00' LT EL. 964.58'
+32.96 –L– 22.00' LT EL. 964.51'
10' CONC. SIDEWALK
2'-6" C&G
D=140'
18'
8"X18" CURB
11' 5' 12' 5' 11'
.02 .01 .00
-L-

+48.60 –L– 28.00' RT EL. 965.51'
+98.60 –L– 23.00' RT EL. 966.11'
+19.93 –L– 23.00' RT EL. 966.39'
R=95'
+65.26 –L– 34.51' RT EL. 967.58'
+59.87 –L– 17.00' RT EL. 964.76'
+29.14 –L– 31.18' RT EL. 964.31'
+79.69 –L– 22.00' RT EL. 964.87'
+63.19 –L– 38.79' RT
R=16.5'
R=16.5'
5' CONC. SIDEWALK

-L- ISLAND DETAIL

+29.12 0.21' LT
+39.17 2.06' LT
+59.33 3.21' LT
R=121'
R=3'
R=70'
+12.04 1.00' RT
+29.12 11.00' RT
+63.80 12.10' RT
R=66'
+78.39 6.00' RT
R=5'
+47.17 11.00' RT
+39.17 11.00' RT
+13.01 –RABT2– 18.00' RT EL. 967.73'
+18.56 –RABT2– 18.00' RT EL. 967.70'
+22.77 –Y5– 32.82' LT EL. 967.47'
R=100'
+70.39 –Y5– 18.00' LT EL. 966.87'
+13.00 –Y5– 18.00' LT EL. 968.45'
-RABT2-
-Y5-
5' CONC. SIDEWALK
2'-6" C&G
+08.09 –L– 31.45' RT EL. 965.77'
+05.26 –L– 33.23' RT EL. 965.85'
R=90'
+22.77 –Y5– 33.06' RT EL. 966.48'
+11.85 –Y5– 26.85' RT EL. 966.46'
R=30'
+55.24 –Y5– 30.24' RT
R=11.5'
+43.77 –Y5– 18.00' RT EL. 967.20'
+12.57 –Y5– 18.00' RT EL. 968.31'
12'

-Y5- ISLAND DETAIL

+17.01 5.23' LT
+21.16 7.51' RT
R=66'
R=3'
+03.03 6.87' LT
R=90'
+92.75 5.85' LT
+02.91 5.07' RT
+92.79 5.21' RT

20' 0' 20' 40'
GRAPHIC SCALE

SEE SHEET 6 FOR PLAN VIEW

"SYSTIME
"SYSDRIVE
USER: FONTAINAX
U5536_Rdy_psh_2B2.dgn

ROUNDABOUT 3 DETAIL

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2B-3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROADWAY DESIGN ENGINEER
NORTH CAROLINA
12/19/2024
SEAL
033400
ENGINEER
SIGNATURE
SFF0D8E4F8F4F4...

CDM Smith
CDM Smith Inc
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3208
NC COA No. F-1255

5/14/99

-Y1A- ISLAND DETAIL

R=5.25′
+40.25
0.00′ RT
+51.90
5.25′ LT
+64.82
5.97′ LT
+74.82
7.17′ LT
R=3′
+89.05
5.84′ LT
+93.06
5.48′ RT
R=51′
R=115.75′
+64.82
5.03′ RT
+74.82
5.01′ RT
+80.75
5.00′ RT

+13.00 –Y5–
18.00′ LT
EL. 968.45′
+62.24 –Y5–
33.68′ LT
EL. 971.29′
+94.82 –Y1A–
33.79′ LT
EL. 972.30′
R=90′
5′ CONC. SIDEWALK
-Y5-
+12.57 –Y5–
18.00′ RT
EL. 968.31′
R=115′
+62.24 –Y5–
31.59′ RT
EL.971.12′
+72.87 –RABT3–
18.00′ RT
EL. 971.82
R=65′
+71.11 –RABT3–
18.00′ RT
EL. 971.87

-Y5- ISLAND DETAIL

+92.22
5.22′ LT
+81.93
5.03′ LT
R=66′
+63.85
7.24′ LT
+92.27
5.73′ RT
+81.98
6.55′ RT
+68.09
4.63′ RT
R=3′

+41.92 –Y1A–
18.00′ LT
EL. 973.15′
+46.92 –Y1A–
22.94′ LT
R=11.5′
+74.49 –Y1A–
18.00′ LT
EL. 973.20′
+94.75
0.00′ LT
5′ CONC. SIDEWALK

NAD 83/NA 2011

+41.26 –Y1A–
18.00′ LT
+35.00 –Y1A–
18.33′ LT
+43.89 –Y1A–
18.00′ LT
EL. 971.81′
+24.82 –Y1A–
32.09′ LT
EL. 972.45′
+77.36 –Y1A–
18.00′ LT
EL. 972.76′
+93.41 –Y1A–
33.37′ RT
R=115′

R=60′
EXIST. 12′
-Y1A- 2′-6" C&G
2′-6" C&G
EXIST. 12′
D=130′
8"X18" CURB
R=80′
R=65′
18′
R=5′
-Y1A-
2′-6" C&G
EXIST. 12′
2′-6" C&G
EXIST. 12′
R=5.25′

+48.82 –Y1A–
18.00′ RT
EL. 972.15′
+69.64 –Y1A–
33.87′ RT
R=90′
R=77′
+94.82 –Y1A–
30.64′ RT
EL. 973.29′
+45.56 –Y5–
58.97′ LT
+17.13 –RABT3–
18.00′ RT
EL. 974.17′
+42.46 –Y5–
56.07′ LT
+19.69 –RABT3–
18.00′ RT
EL. 974.25′
-RABT3-
2′-6" C&G
R=87′
+32.24 –Y5–
31.91′ LT
EL. 974.45′
R=100′
+98.90 –Y5–
32.79′ LT
5′ CONC. SIDEWALK
R=50′
1′-6" C&G
EXIST.
EXIST.
5′ CONC. SIDEWALK
+81.36 –Y5–
18.00′ LT
EL. 976.51′
-Y5-

R=240′
+80.81 –Y1A–
18.00′ RT
EL. 972.95′
R=115′
+45.85 –Y1A–
42.32′ RT
+24.82 –Y1A–
32.55′ RT
EL. 973.74′
+24.43 –Y1A–
26.50′ RT
+09.43 –Y1A–
32.00′ RT
+10.59 –RABT3–
25.11′ RT
EL. 973.76′
+32.61 –Y5–
55.58′ RT
+32.24 –Y5–
30.33′ RT
EL. 974.47′
R=100′
+83.21 –Y5–
35.42′ RT
+69.94 –Y5–
33.86′ RT
+89.57 –Y5–
18.00′ RT
EL. 976.32′
+37.35 –Y5–
25.23′ RT

-Y5- ISLAND DETAIL

R=3′
+30.58
5.70′ RT
R=50.75′
+18.43
4.25′ RT
+12.25
5.25′ RT
+02.25
5.25′ RT
R=5.25′
+26.44
5.93′ LT
+12.23
7.32′ LT
+02.23
5.44′ LT
+42.60
0.00′ LT

-Y1A- ISLAND DETAIL

R=66′
+44.77
5.03′ LT
+54.82
5.01′ LT
+26.46
7.09′ LT
+30.57
5.72′ RT
R=3′
+67.33
5.25′ RT
R=115.75′
+44.67
7.10′ RT
+54.82
5.93′ RT

NOTES:
1) PROVIDE CUT OUT FOR SIGN INSTALLATION IN MONOLITHIC CONCRETE ISLAND. ENGINEER TO PROVIDE LOCATION OF FINAL SIGN PLACEMENT.
2) ALL ISLAND RADII ARE 1′ UNLESS OTHERWISE NOTED.

SEE SHEET 6 FOR PLAN VIEW

20′ 0′ 20′ 40′
GRAPHIC SCALE

LEGEND
CONCRETE SW/DRWY/ISLAND
CONCRETE TRUCK APRON

SYSTIME
U5536_Rdy_psh_2B3.dgn
USER: FRANKLIN

ROUNDABOUT 4 DETAIL

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2B-4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROADWAY DESIGN ENGINEER
NORTH CAROLINA
12/19/2024
SEAL 033400
DocuSigned by: Travis Z. Walker
SIGNATURE

CDM Smith
CDM Smith Inc
5400 Glenwood Avenue Suite 400
Raleigh, NC 27612-3225
NC COA No. F-1255

NAD 83/NA 2011

-L- ISLAND DETAIL

+97.24 5.66′ LT
R=3002′
+81.96 19.43′ LT
+95.10 19.41′ LT
+68.23 15.88′ LT
R=3′
R=90′
R=65′
R=100′
+98.23 24.07′ RT
R=200′
+65.32 14.16′ RT
+14.88 –Y8– 41.20′ LT EL. 951.15′
+97.45 –L– 44.82′ LT EL. 952.51′
+62.68 0.23′ RT
R=4.625′
+78.83 17.66′ RT
R=201′
+93.09 –L– 43.06′ LT EL. 952.46′
+76.87 –L– 18.86′ LT EL. 950.41′
+26.87 –L– 28.00′ LT EL. 949.13′
R=2000′

-Y8- ISLAND DETAIL

+81.22 –Y8– 15.66′ RT EL. 947.84′
+88.02 –Y8– 17.57′ LT EL. 947.81′
EXIST. 60
R=125′
10′ CONC. SIDEWALK
R=4′
R=150.75′
R=100′
+44.61 7.74′ LT
R=90′
R=89.5′
+34.35 10.17′ LT
R=150.75′
+14.88 –Y8– 45.08′ RT EL. 949.88′
+37.47 –L– 50.56′ LT EL. 949.72′
+65.00 1.09′ LT
+55.74 2.91′ RT
R=100.75′
+44.81 3.42′ RT
+34.76 4.45′ RT
+15.22 15.72′ LT
R=3′
+57.12 –L– 41.61′ LT EL. 949.32′
+20.78 3.59′ RT
+65.94 –L– 15.95′ LT EL. 946.49′
+91.99 –L– 2.75′ LT
+15.94 –L– 18.75′ LT EL. 945.80′
R=800′
R=519.25′

D=140′
8″X18″ CURB
-RABT 4-
18′
2′-6″ C&G
1′-6″ C&G
-L-
11′
12′
5′
11′
5′
11′
2′-6″ C&G
-L-
5′ CONC. SIDEWALK

+51.41 –L– 16.92′ RT EL. 949.89′
+01.41 –L– 22.00′ RT EL. 948.70′
R=200′
+68.91 –L– 34.90′ RT EL. 952.66′
+97.45 –L– 49.14′ RT EL. 953.90′
+74.89 –Y8– 43.04′ LT EL. 953.68′
+73.80 11.13′ RT
R=101′
R=80′
+06.35 –Y8– 18.00′ LT EL. 954.59′
+09.85 –Y8– 30.51′ RT
+11.33 –Y8– 18.00′ RT EL. 954.88′
+37.47 –L– 39.02′ RT EL. 950.62′
+74.89 –Y8– 39.14′ RT EL. 952.08′
R=150′
+63.68 –L– 13.75′ RT EL. 945.35′
+11.92 –L– 14.50′ RT EL. 946.92′
+12.59 –L– 26.98′ RT
+91.99 –L– 2.75′ RT
+13.67 –L– 18.75′ RT EL. 944.70′

-Y8- ISLAND DETAIL

R=3′
+69.06 5.49′ LT
+53.09 6.51′ LT
R=92′
+43.01 5.38′ LT
R=101′
R=5′
+32.11 5.00′ LT
R=102′
+53.13 6.38′ RT
+43.03 5.18′ RT
R=101′
+37.82 5.00′ RT
+90.00 0.00′ LT

-L- ISLAND DETAIL

+53.08 24.34′ LT
R=801′
+32.77 30.35′ LT
R=61′
R=90′
R=100′
R=3′
+67.07 20.80′ LT
R=800′
+42.92 8.79′ RT
+56.04 8.76′ RT
R=150′
+69.04 6.00′ RT
+79.77 6.17′ RT
R=530.25′

NOTES:
1) PROVIDE CUT OUT FOR SIGN INSTALLATION IN MONOLITHIC CONCRETE ISLAND. ENGINEER TO PROVIDE LOCATION OF FINAL SIGN PLACEMENT.
2) ALL ISLAND RADII ARE 1′ UNLESS OTHERWISE NOTED.

GRAPHIC SCALE 20′ 0′ 20′ 40′

LEGEND
CONCRETE SW/DRWY/ISLAND
CONCRETE TRUCK APRON

SEE SHEET 7 FOR PLAN VIEW

SYSTIME: 5/14/99
USER: CONRADAM
U5536_Rdy_psh_2B4.dgn

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2B-5

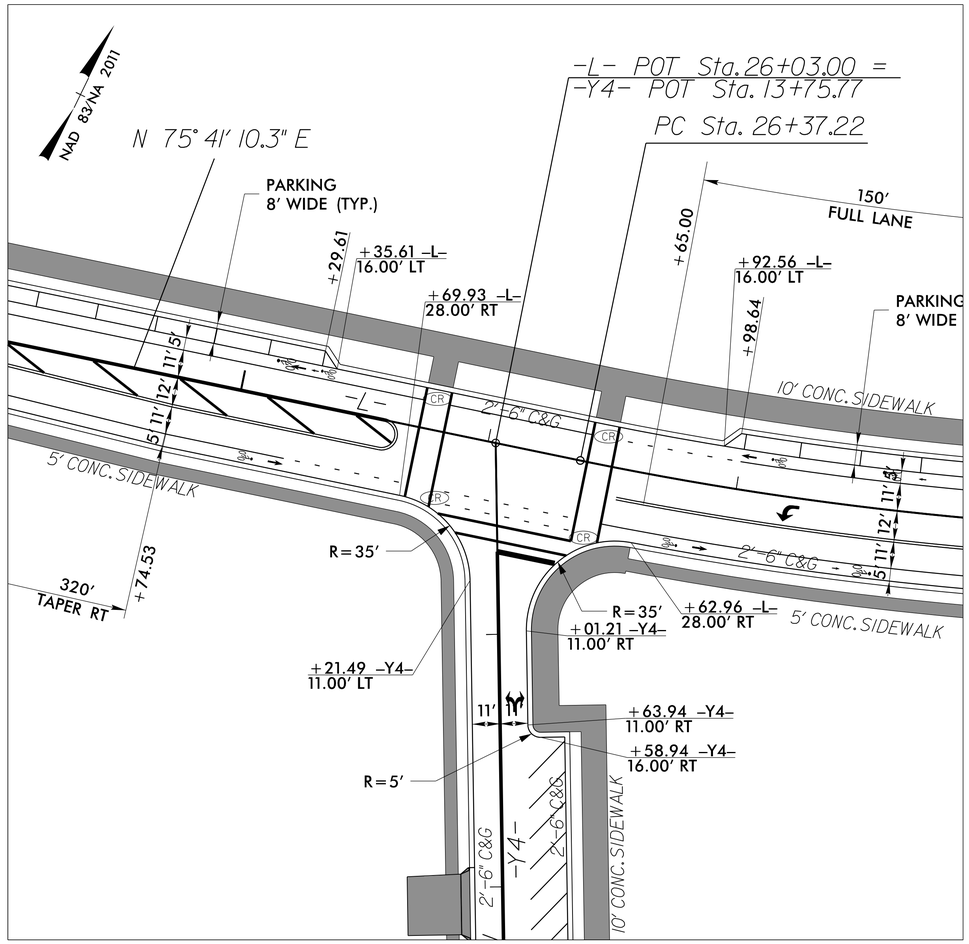
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROADWAY DESIGN ENGINEER

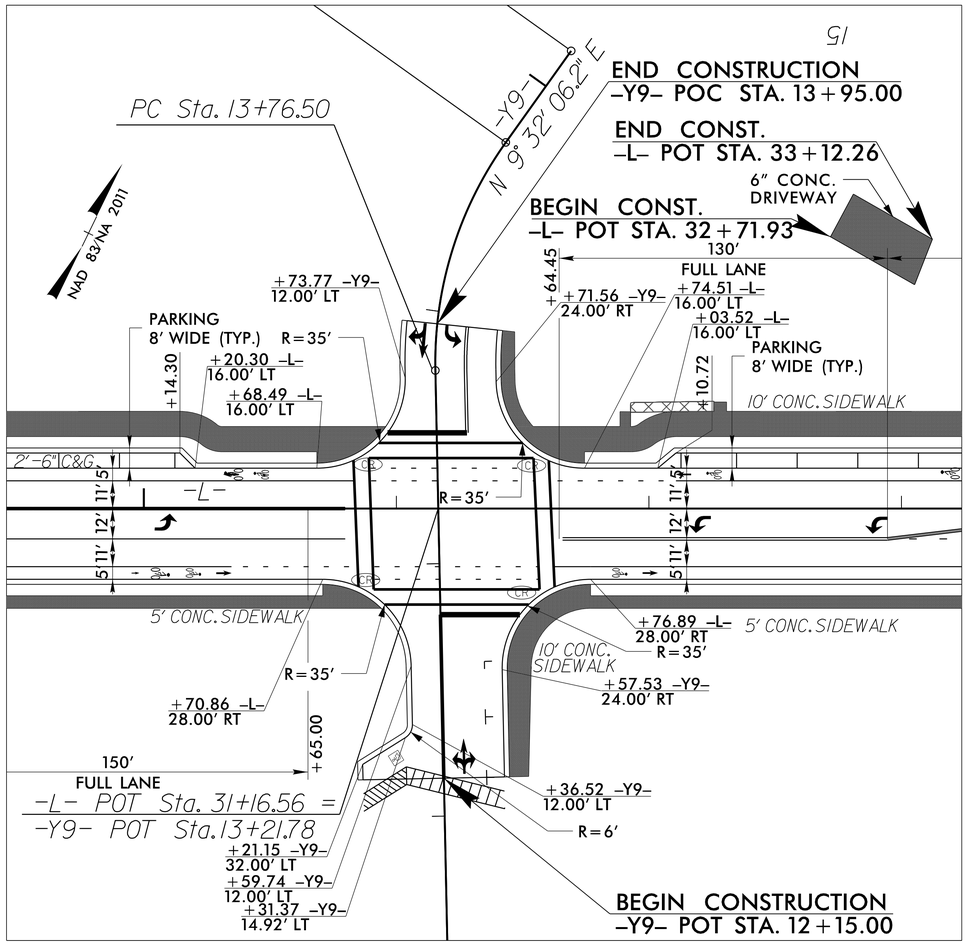
NORTH CAROLINA
5/19/2024
SEAL
033400
ENGINEER
Digitally signed by Stanley Zygmunt Kreiger
SFFD0E3E4F7E4E0...

CDM Smith
CDM Smith Inc
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3220
NC COA No. F-1255

INTERSECTION DETAIL
–L– & –Y4–



INTERSECTION DETAIL
–L– & –Y9–



30' 0' 30' 60'
GRAPHIC SCALE

LEGEND
CONCRETE SW/DRWY/ISLAND

SEE SHEET 5 FOR PLAN VIEW

-SYSTIME-
-SYSDATE-
USER: CDMSMITH

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2B-6

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

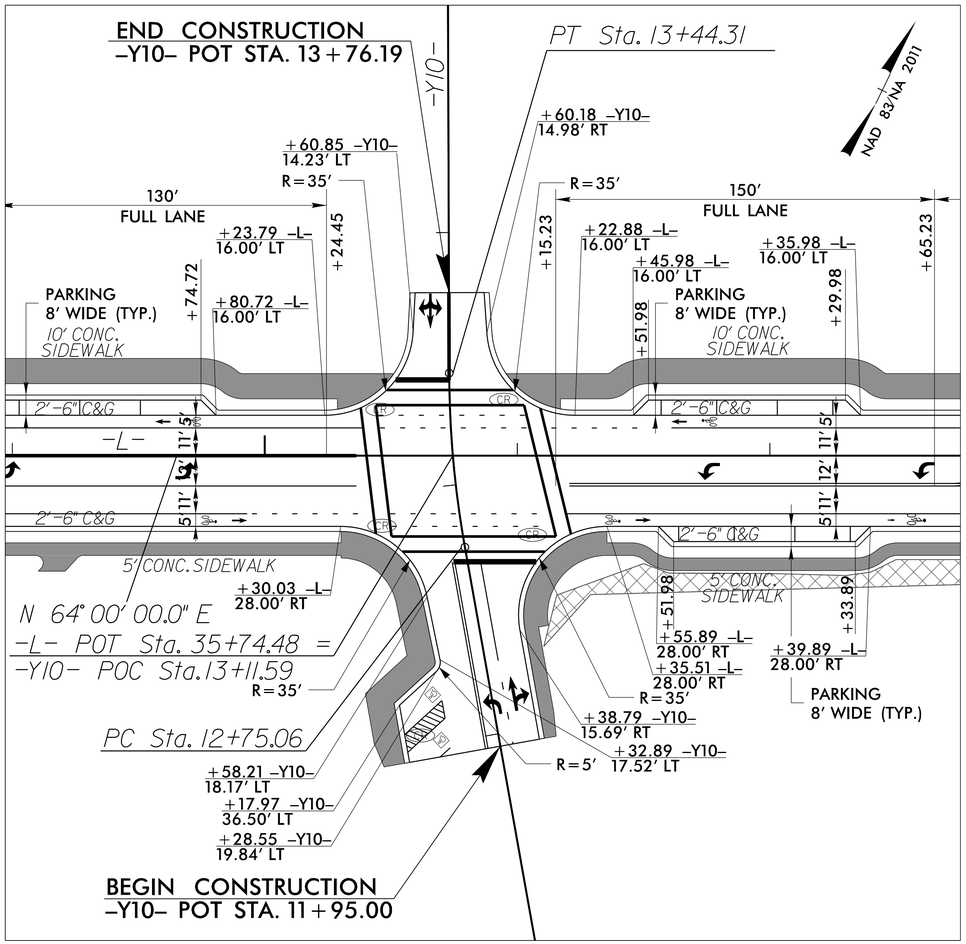
ROADWAY DESIGN ENGINEER

NORTH CAROLINA — 5/29/2024 — SEAL 033400 — ENGINEER

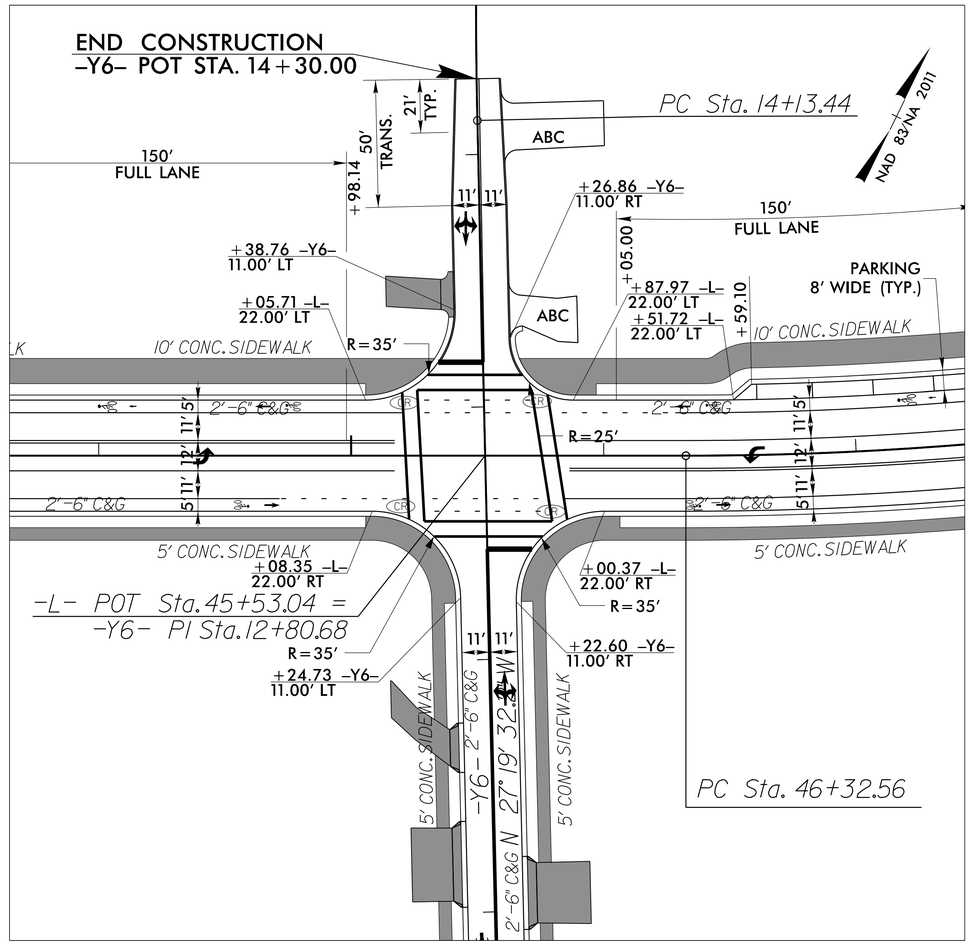
Digitally signed by Jessica Z. Kreger

CDM Smith
CDM Smith Inc
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3220
NC COA No. F-1255

INTERSECTION DETAIL
–L– & –Y10–



INTERSECTION DETAIL
–L– & –Y6–



30′ 0′ 30′ 60′
GRAPHIC SCALE

LEGEND
CONCRETE SW/DRWY/ISLAND

SEE SHEET 5 AND 6 FOR PLAN VIEW

SYSTINE
U-5536_Rdy_psh_286.dgn
USER: rcrenshaw

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2B-7

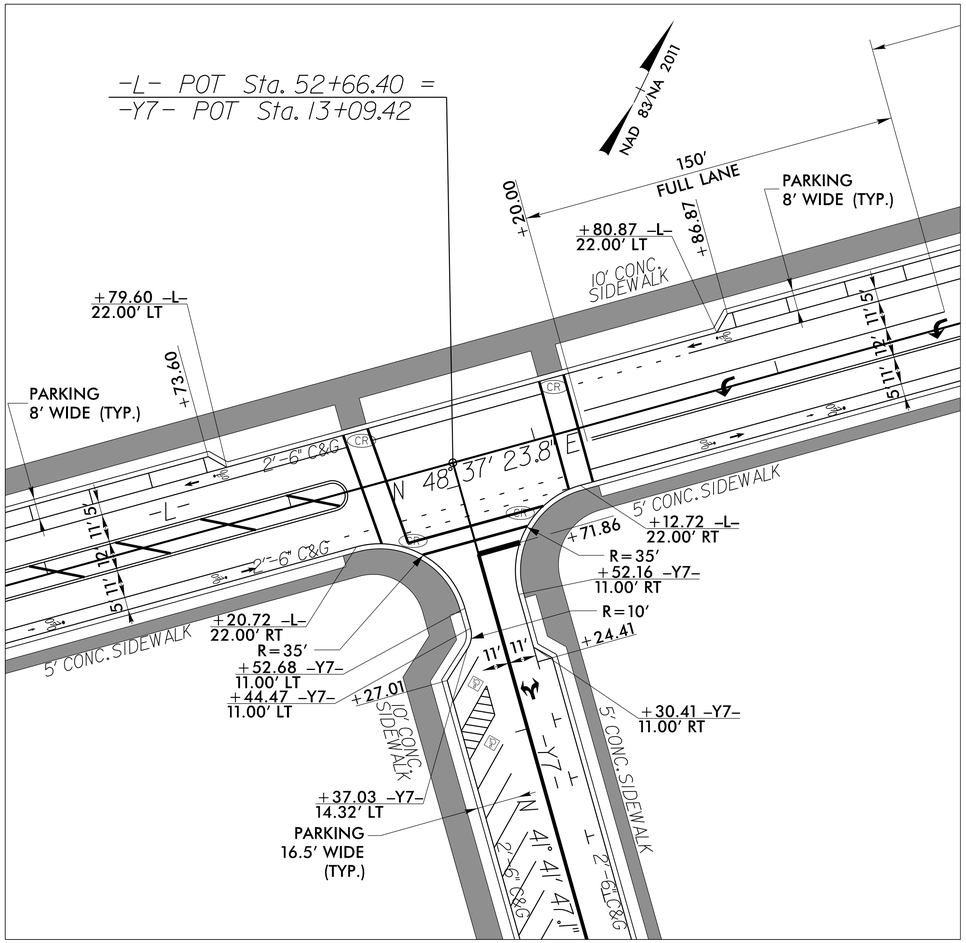
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROADWAY DESIGN ENGINEER

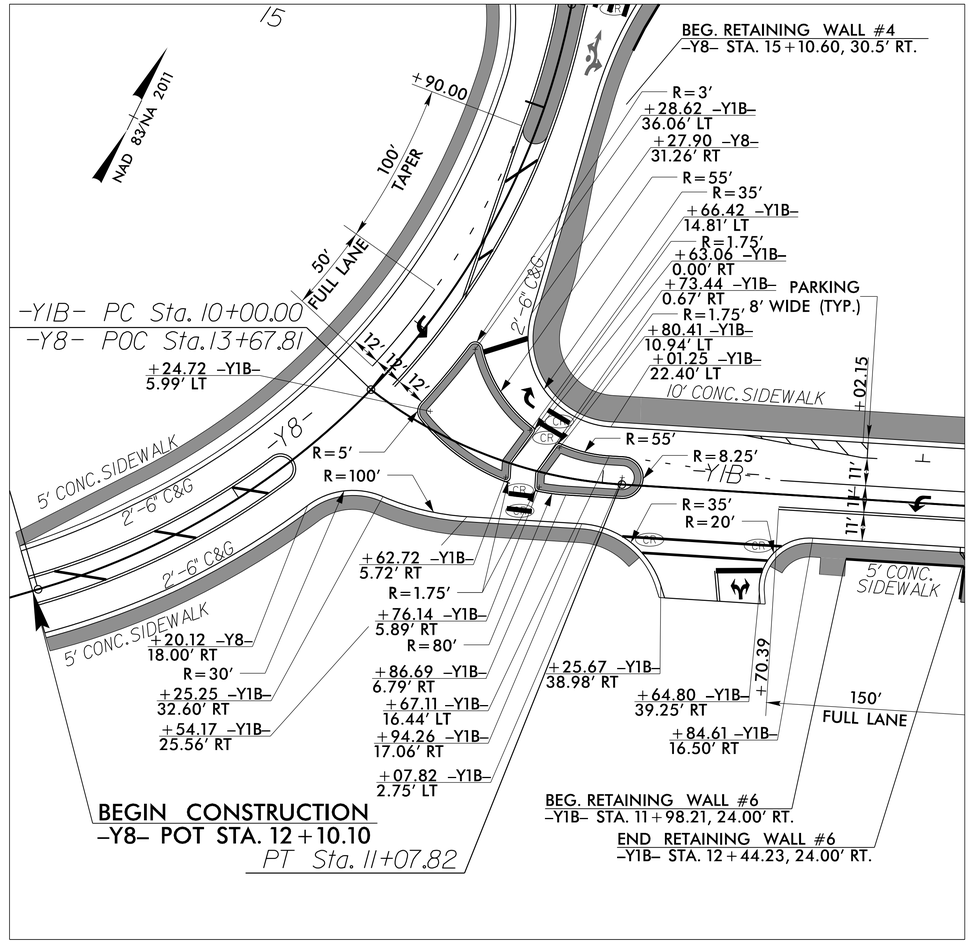
NORTH CAROLINA
12/19/2024
SEAL
033400
Digitally signed by PAMELA FISHER

CDM Smith
CDM Smith Inc
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3220
NC COA No. P-1255

INTERSECTION DETAIL
–L– & –Y7–



INTERSECTION DETAIL
–Y8– & –Y1B–



30' 0' 30' 60'
GRAPHIC SCALE

LEGEND
CONCRETE SW/DRWY/ISLAND

SEE SHEET 7 FOR PLAN VIEW

SYSTIME
U5536_Rdy_psh_287.dgn
USER: LFRANKHAM

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2B-8

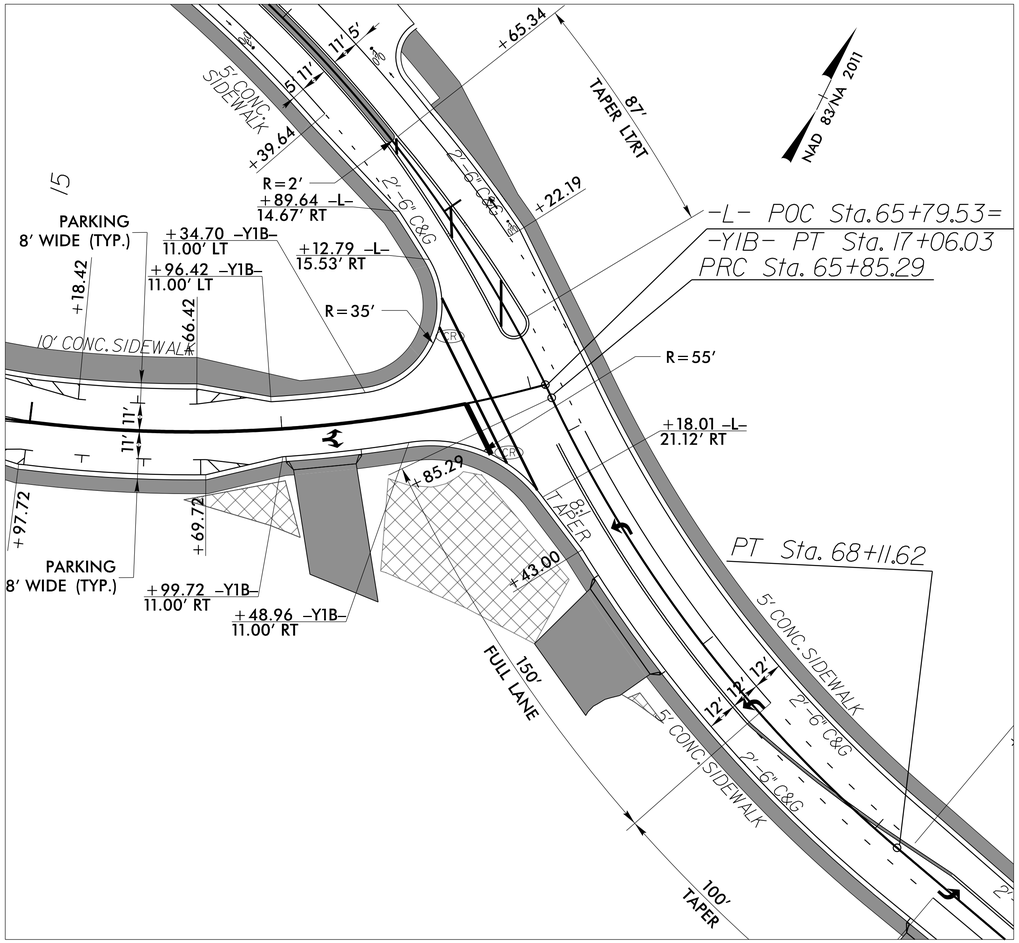
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ROADWAY DESIGN ENGINEER

NORTH CAROLINA
10/29/2024
SEAL
033400
Signed by: JEFFREY RAMOS FISHER
SFF5B0B5A4A4F3...

CDM Smith
CDM Smith Inc
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3220
NC COA No. F-1255

INTERSECTION DETAIL
–L– & –Y1B–



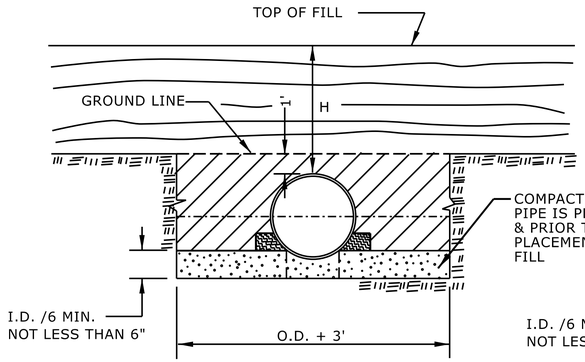
30' 0' 30' 60'
GRAPHIC SCALE

LEGEND
CONCRETE SW/DRWY/ISLAND

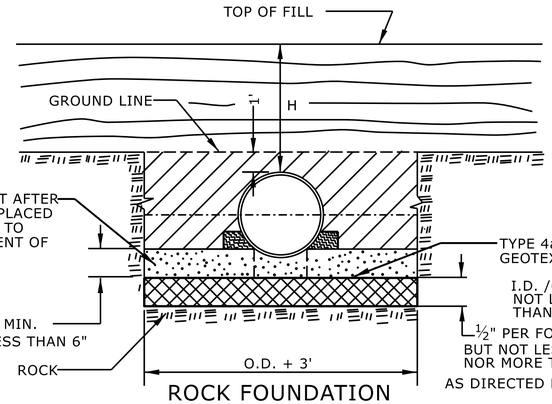
SEE SHEET 7 FOR PLAN VIEW

SYSTIME = 10/29/2024 10:47:10 AM
USER: JRAMOS
U5536_Rdy_psh_288.dgn

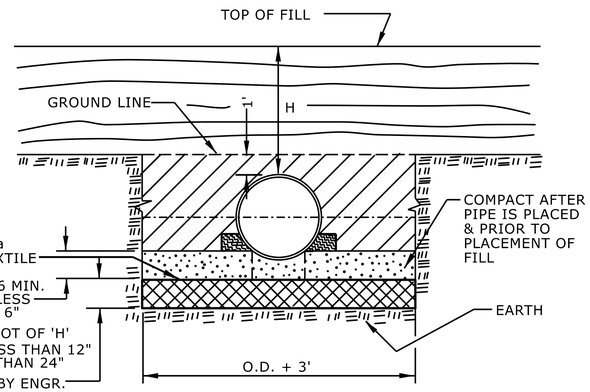
PROJECT REFERENCE NO.	SHEET NO.
U-5536	2C-1



NORMAL EARTH FOUNDATION

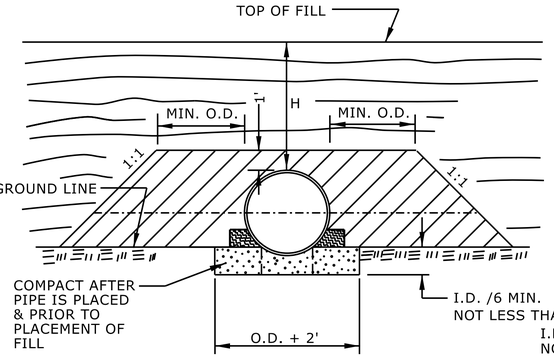


ROCK FOUNDATION

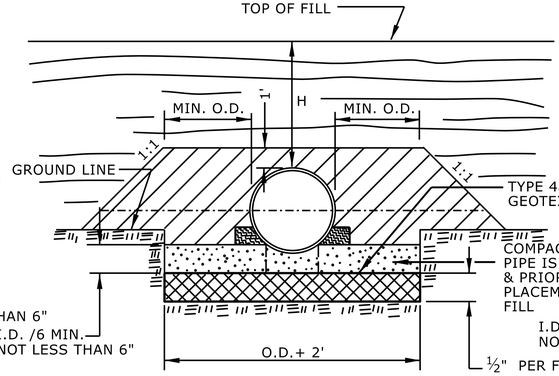


UNSUITABLE MATERIAL FOUNDATION

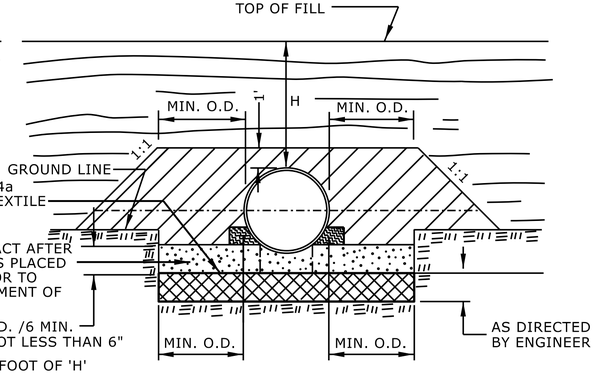
PIPE IN TRENCH



NORMAL EARTH FOUNDATION



ROCK FOUNDATION



UNSUITABLE MATERIAL FOUNDATION

PIPE ABOVE GROUND

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

FLEXIBLE PIPE

SHEET 1 OF 2

300.01

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033144 NICOLE MY HACKER 7/25/2024

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CONTRACTS STANDARDS AND DEVELOPMENT UNIT

Office 919-707-6950 FAX 919-250-4119

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ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
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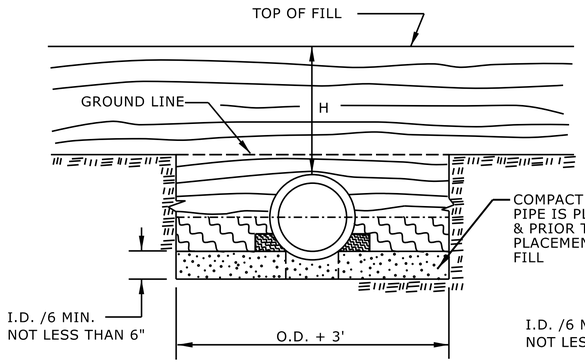
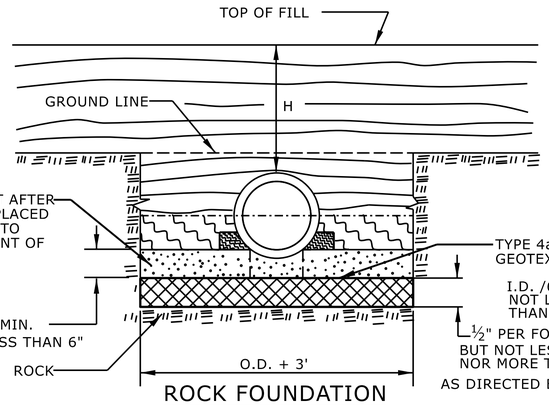
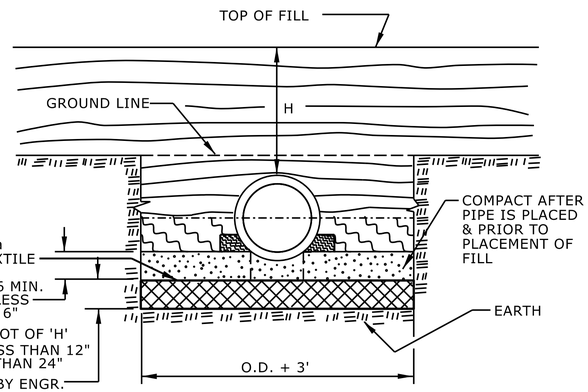
PROJECT REFERENCE NO.	SHEET NO.
U-5536	2C-2



NORMAL EARTH FOUNDATION

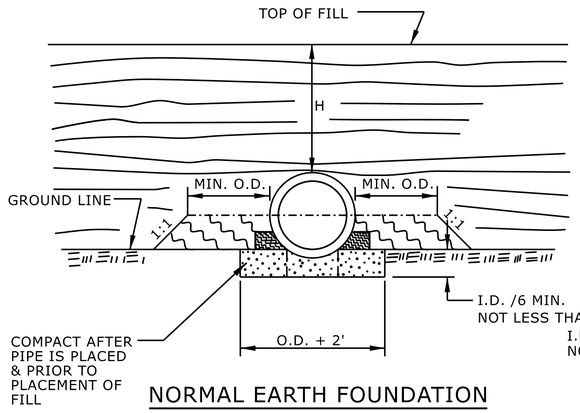


ROCK FOUNDATION

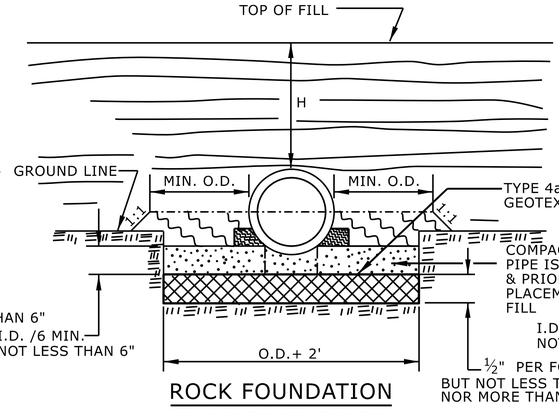


UNSUITABLE MATERIAL FOUNDATION

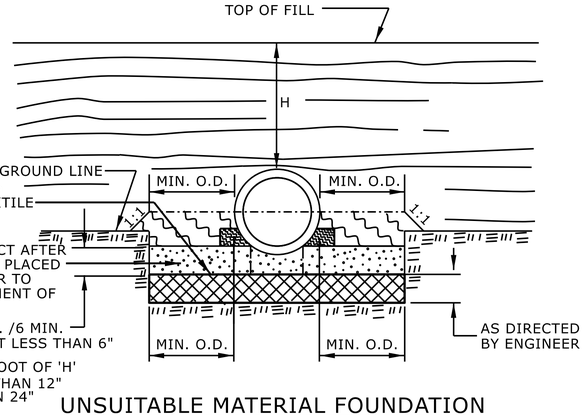
PIPE IN TRENCH



NORMAL EARTH FOUNDATION



ROCK FOUNDATION



UNSUITABLE MATERIAL FOUNDATION

PIPE ABOVE GROUND

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

RIGID PIPE

SHEET 2 OF 2

300.01

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033144 NICOLE M. HACKLER 12/19/2024 5884323D5F4F4A0...

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5/14/99

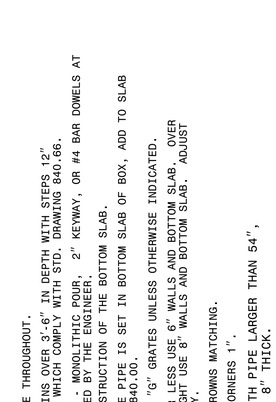
PROJECT REFERENCE NO.	SHEET NO.
U-5536	2C-3

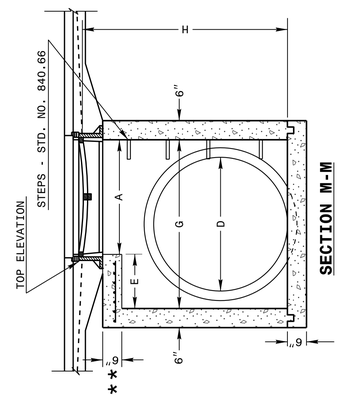
ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH CONCRETE CATCH BASIN
12″ THRU 84″ PIPE

SHEET 1 OF 2 **840D02**

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL CATCH BASINS OVER 3'-6″ IN DEPTH WITH STEPS 12″ ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2″ KEYWAY, OR #4 BAR DOWELS AT 12″ CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
FOR 8'-0" IN HEIGHT OR LESS USE 6″ WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8″ WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
CHAMFER ALL EXPOSED CORNERS 1".
** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8″ THICK.

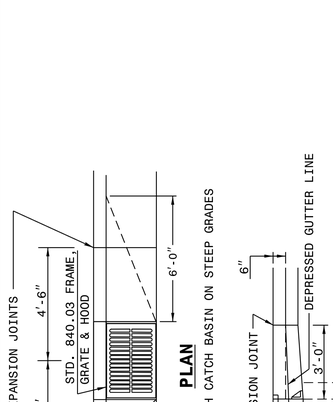


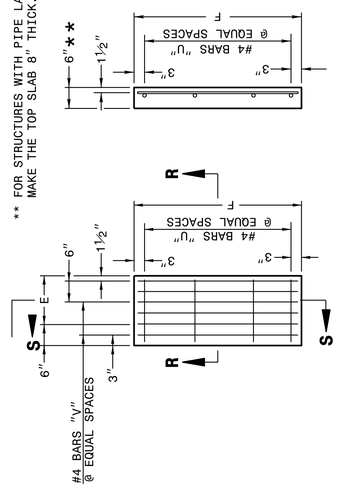


STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH CONCRETE CATCH BASIN
12″ THRU 84″ PIPE

SHEET 2 OF 2 **840D02**





* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN(BASED ON MIN. HEIGHT, H, WITH NO RISER) *

PIPE D	SPAN A	WIDTH B	WIDTH C	SPAN G	MIN. HEIGHT H	COVER DIMENSION E	COVER DIMENSION F	BARS-U NO.	BARS-U LENGTH	BARS-V NO.	BARS-V LENGTH	BARS-W NO.	BARS-W LENGTH	TOTAL LBS.	CU.YDS. CONC. IN BOX TOP SLAB	CU.YDS. CONC. IN BOX BOTTOM SLAB	CU.YDS. CONC. IN BOX TOT. CONC. FOR MINIMUM HEIGHT H	DEDUCTIONS ONE PIPE C.M.	DEDUCTIONS ONE PIPE R.C.
12″	3'-0″	2'-2″	--	--	2'-0″	--	--	--	--	--	--	--	--	--	--	0.235	0.772	0.015	0.026
15″	3'-0″	2'-2″			2'-3″											0.235	0.829	0.023	0.036
18″	3'-0″	2'-2″			2'-6″											0.235	0.887	0.033	0.049
24″	3'-0″	2'-2″			3'-1″											0.235	1.001	0.059	0.085
30″	3'-0″	2'-2″	3'-4″	3'-4″	3'-10″	1'-2″	4'-4″	4	1'-6″	2	4'-1″	3	4'-1″	39	0.123	0.347	1.433	0.092	0.127
36″	3'-0″	2'-2″	3'-10″	3'-10″	4'-4″	1'-8″	4'-10″	4	1'-11″	3	4'-7″	3	4'-7″	43	0.161	0.432	1.714	0.132	0.178
42″	3'-0″	2'-2″	4'-5″	4'-5″	4'-11″	2'-2″	5'-5″	5	2'-5″	4	5'-2″	3	5'-2″	47	0.200	0.543	1.738	0.160	0.243
48″	3'-0″	2'-2″	5'-0″	5'-0″	5'-6″	2'-10″	6'-0″	5	3'-1″	4	5'-9″	3	5'-9″	51	0.235	0.667	2.052	0.235	0.317
54″	3'-0″	2'-2″	5'-7″	5'-7″	6'-0″	3'-5″	6'-7″	6	3'-8″	5	6'-4″	3	6'-4″	56	0.289	0.802	2.387	0.297	0.401
60″	3'-0″	2'-2″	6'-3″	6'-3″	6'-6″	4'-1″	7'-3″	6	4'-4″	5	7'-0″	3	7'-0″	61	0.340	0.973	2.722	0.363	0.546
66″	3'-0″	2'-2″	6'-11″	6'-11″	7'-0″	4'-9″	7'-11″	7	5'-0″	6	7'-8″	3	7'-8″	66	0.391	1.160	3.057	0.440	0.655
72″	3'-0″	2'-2″	7'-6″	7'-6″	7'-6″	5'-3″	8'-6″	7	5'-6″	6	8'-3″	3	8'-3″	72	0.442	1.340	3.392	0.524	0.774
78″	3'-0″	2'-2″	8'-1″	8'-1″	8'-0″	5'-11″	9'-1″	8	6'-2″	7	8'-10″	3	8'-10″	78	0.493	1.530	3.727	0.615	0.893
84″	3'-0″	2'-2″	8'-9″	8'-9″	8'-6″	6'-7″	9'-9″	8	6'-10″	7	9'-6″	3	9'-6″	84	0.544	1.760	4.062	0.713	1.010

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 33144 NATHAN T. TAYLER 5884322558

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ORIGINAL BY: 2002 Std.840.01 DATE:
MODIFIED BY: E.E. WARD DATE: 3-1-02
CHECKED BY: DATE:
FILE SPEC.: s:Special Details/jhowerton/840d02.dgn

10-AUG-2017 10:11
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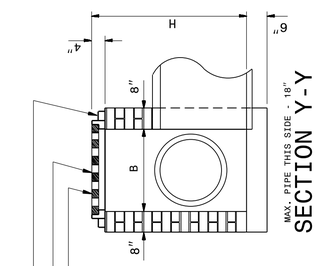
jhowerton
AT CSD-292595

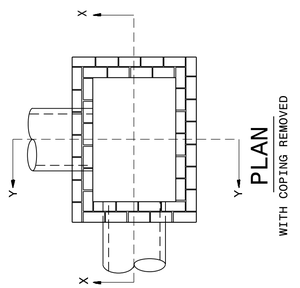
PROJECT REFERENCE NO.	SHEET NO.
U-5536	2C-4

GENERAL NOTES:

MORTAR JOINTS ½" TO ⅛" THICK.
USE CLASS "B" CONCRETE THROUGHOUT.
USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
CONSTRUCT WITH PIPE CROWNS MATCHING.
DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.



SECTION Y-Y



PLAN

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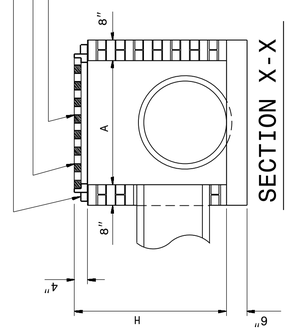


SECTION X-X

DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)								
DIMENSIONS OF BOX & PIPE					CUBIC YARDS BRICK MASONRY		DEDUCTIONS FOR ONE PIPE	
PIPE D	SPAN A	WIDTH B	MIN. HEIGHT H		BOTTOM SLAB	WALL PER FOOT HT.	TOTAL BRICK MASONRY FOR MIN. HEIGHT, H	C.S.	R.C.
12"	3'-0"	2'-0"	1'-8"		0.268	0.313	0.470	0.020	0.032
15"			1'-11"		0.268	0.313	0.548	0.031	0.047
18"			2'-1"		0.268	0.313	0.626	0.044	0.065
24"			2'-9"		0.268	0.313	0.835	0.078	0.113
30"	3'-0"	2'-0"	3'-2"		0.268	0.313	0.991	0.122	0.170

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

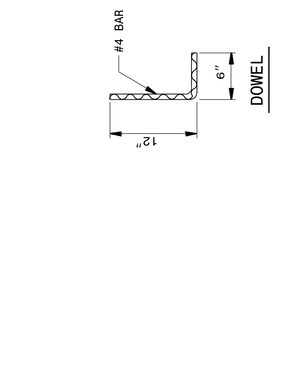
MINIMUM DEPTH BRICK DROP INLET

12" THRU 30" PIPE

SHEET 1 OF 1 **840D15**

GENERAL NOTES:

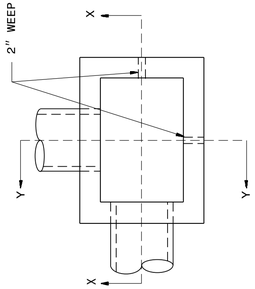
USE CLASS "B" CONCRETE THROUGHOUT.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
CONSTRUCT WITH PIPE CROWNS MATCHING.
INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.



SECTION Y-Y

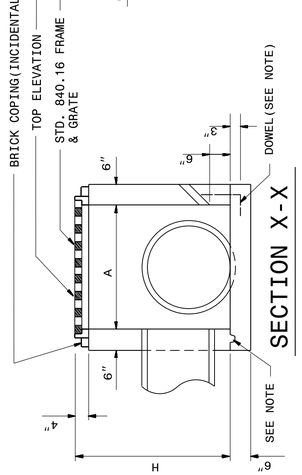
DOWEL

DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)								
DIMENSIONS OF BOX & PIPE					CUBIC YARDS CONC. IN BOX		DEDUCTIONS FOR ONE PIPE	
PIPE D	SPAN A	WIDTH B	MIN. HEIGHT H		BOTTOM SLAB	WALL PER FT. HT.	TOTAL CONCRETE FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-0"	1'-8"		0.222	0.222	0.555	0.015	0.026
15"			1'-11"				0.611	0.023	0.036
18"			2'-1"				0.667	0.033	0.049
24"			2'-9"				0.814	0.059	0.085
30"	3'-0"	2'-0"	3'-2"		0.222	0.222	0.925	0.092	0.127



PLAN

WITH GRATE & FRAME REMOVED



SECTION X-X

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

MINIMUM DEPTH CONCRETE DROP INLET

12" THRU 30" PIPE

SHEET OF **840D14**

CONTRACT STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: 2002 STD. 840.14 DATE:
MODIFIED BY: E.E. WARD DATE: 3-4-02
CHECKED BY: DATE:
FILE SPEC.:

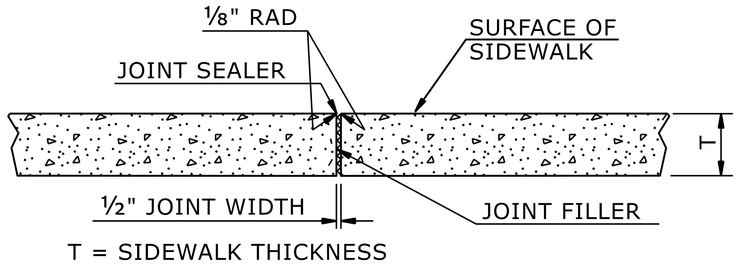
PROJECT REFERENCE NO.	SHEET NO.
U-5536	2C-5

NOTES:

CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

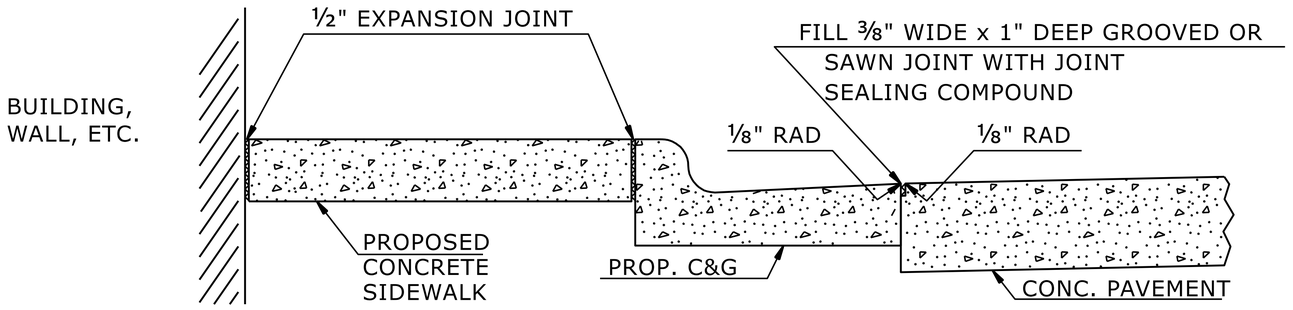
PLACE A GROOVE JOINT 1" DEEP WITH ⅛" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE ½" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A ½" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.06 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



T = SIDEWALK THICKNESS

TRANSVERSE EXPANSION JOINT IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CONCRETE SIDEWALK

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033144 NICOLE M. TICKLER 7/19/2024

SHEET 1 OF 1

848D01

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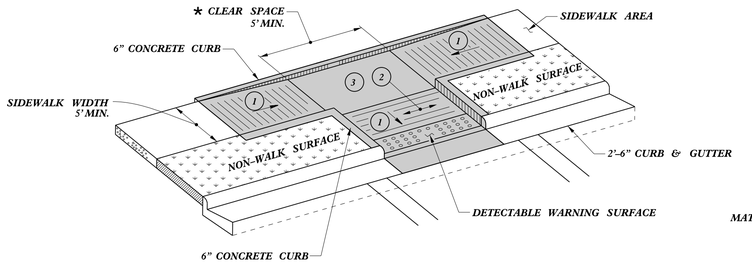
CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

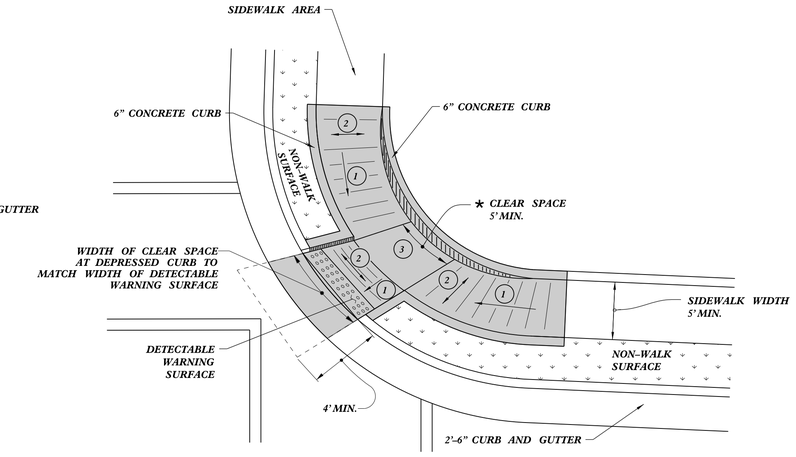
ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2C-6

* – *WHERE CLEAR SPACE IS CONSTRAINED ON TWO OR MORE SIDES, THE CLEAR SPACE SHALL BE 4'MINIMUM X 5'MINIMUM, WITH 5' PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.*



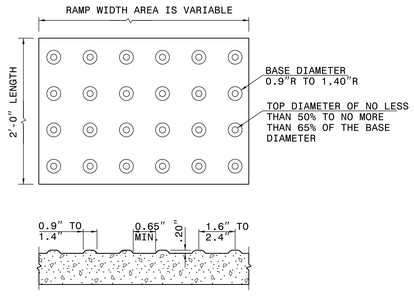
TYPE 3



TYPE 3 MODIFIED
INSTALLATION IN A RADIUS

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

(1) *8.33% (12:1) MAX RAMP SLOPE*

(2) *CROSS SLOPE: 2.00%*

(3) *MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.*

PAY LIMITS FOR 1 CURB RAMP

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CURB RAMP
PARALLEL RAMP

SHEET 9 OF13

848D06

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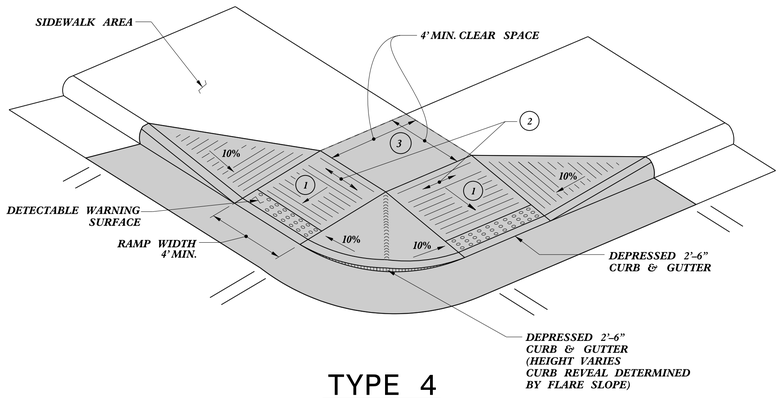
CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

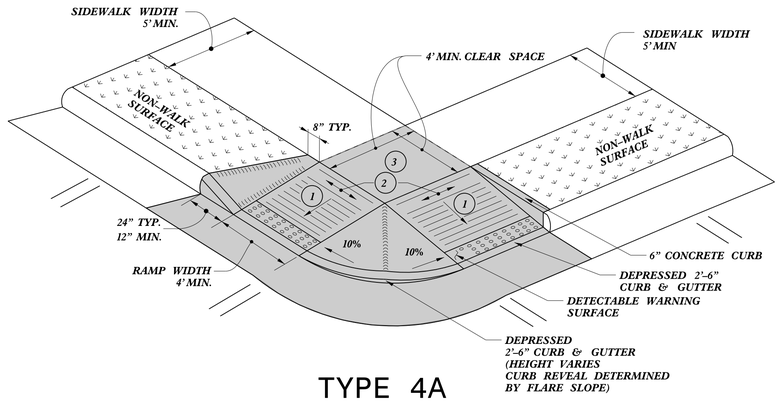
SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 12-22-2023
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: special details\nmhackler\D0609.dgn

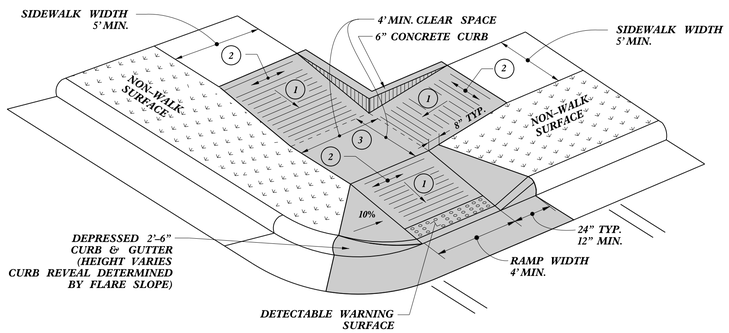
PROJECT REFERENCE NO.	SHEET NO.
U-5536	2C-7



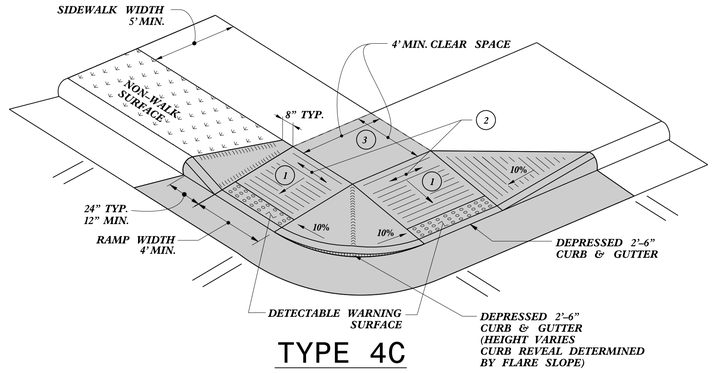
TYPE 4



TYPE 4A



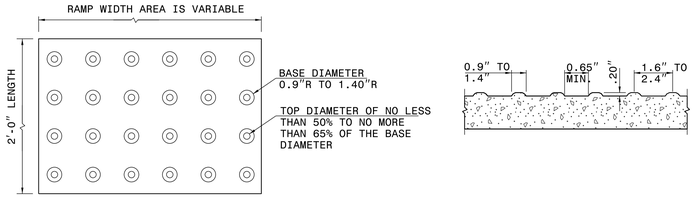
TYPE 4B



TYPE 4C

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

1. 8.33% (12:1) MAX RAMP SLOPE
2. CROSS SLOPE: 2.00%
3. MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.

PAY LIMITS FOR 1 OR 2 CURB RAMPS (CALCULATE BASED ON NUMBER OF SETS OF DETECTABLE WARNING SURFACES

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

CURB RAMP

SHARED LANDING

SHEET 10 OF 13

848D06

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CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 12-22-2023
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: special details\nmhackler\848D0610.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2C-8

GEOTECHNICAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 031361 ENGINEER SHIPING YANG

DocuSigned by: Shiping Yang 7A7310E67F76411...

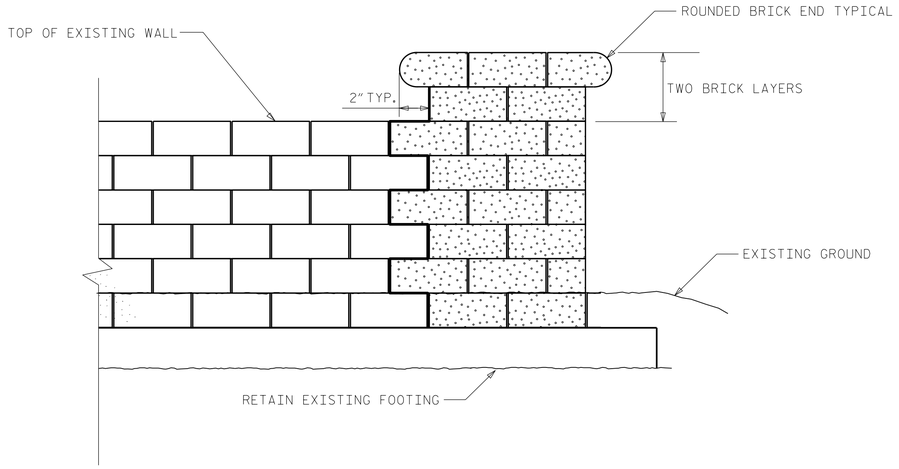
11/15/2024

SIGNATURE DATE

ENGINEER

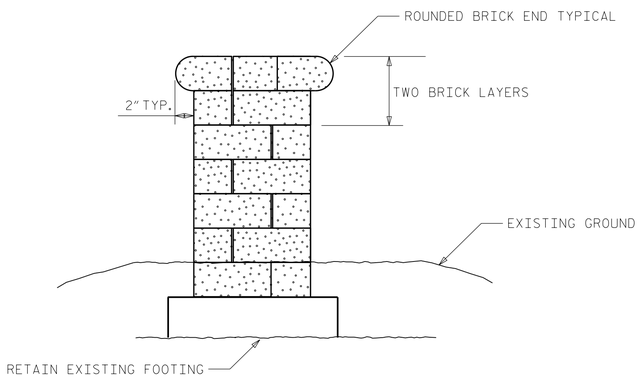
SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



SIDE VIEW OF THE END OF WALL

CLEANED/REUSED BRICKS



FRONT VIEW OF END OF WALL

NOTES:

REMOVE AND CLEAN EXISTING BRICKS FOR REUSE AT LOCATION SHOWN ON PLAN.

"TOOTH" IN BRICKS TO CREATE A FINISHED END TO MATCH EXISTING CONDITIONS.

USE TYPE S MORTAR AND COLOR AS NEEDED TO MATCH EXISTING WALL.

SEE PLAN SHEET 5 FOR WALL LOCATION.

PREPARED BY: SY	DATE: 10/2024
REVIEWED BY: SCC	DATE: 10/2024

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

END OF EXISTING PLAYGROUND WALL DETAIL

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1	SY	11/2024	3		
2			4		

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-5536	2D-1

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

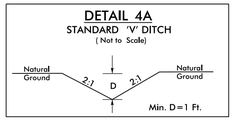
HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 33246 ENGINEER LINDSAY MARIE JOHNS 24345B3223F1484...

8/19/2024

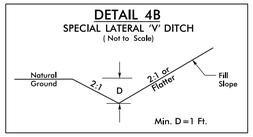
MI Engineering, PLLC
1011 Schaub Drive
Suite 100
Raleigh, NC 27606
NC COA No. P-0671

DETAIL 4A
STANDARD 'V' DITCH
(Not to Scale)



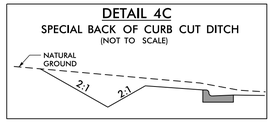
FROM Y2 STA. 12+55 RT, L=50', S=0.46%, DDE=3 CY
FROM L STA. 22+31 LT, L=45', S=0.33%, DDE=3 CY

DETAIL 4B
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



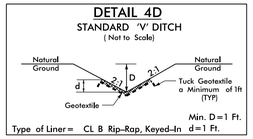
FROM Y2 STA. 11+60 TO STA. 12+68 LT

DETAIL 4C
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)



FROM Y3 STA. 13+80 TO STA. 15+80 LT
FROM L STA. 11+24 TO STA. 12+50 RT
FROM L STA. 16+50 TO STA. 18+19 RT.
FROM L STA. 21+52 TO STA. 22+31 LT.

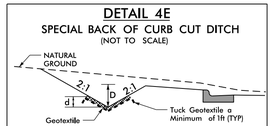
DETAIL 4D
STANDARD 'V' DITCH
(Not to Scale)



Type of Liner= CL B Rip-Rap, Keyed-In d=1 Ft.

FROM L STA. 17+60 RT, L=30', S=10.8%, DDE=3 CY
11 TONS CL B RIP RAP, 32 SY GEOTEXTILE

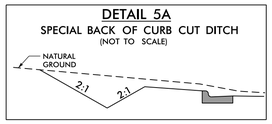
DETAIL 4E
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)



Type of Liner= CL B Rip-Rap, Keyed-In d=1 Ft.

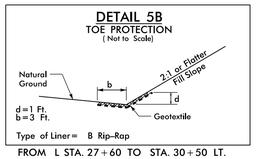
FROM L STA. 17+60 TO STA. 18+19 RT.
21 TONS CL B RIP RAP, 62 SY GEOTEXTILE

DETAIL 5A
SPECIAL BACK OF CURB CUT DITCH
(NOT TO SCALE)



FROM L STA. 25+11 TO STA. 25+73 RT.
FROM Y4 STA. 10+75 TO STA. 13+32 LT.

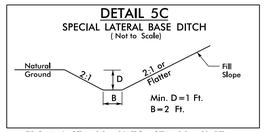
DETAIL 5B
TOE PROTECTION
(Not to Scale)



Type of Liner= B Rip-Rap

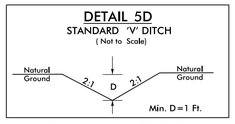
FROM L STA. 27+60 TO STA. 30+50 LT.

DETAIL 5C
SPECIAL LATERAL BASE DITCH
(Not to Scale)



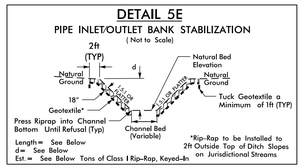
FROM L STA. 28+21 TO STA. 28+61 RT

DETAIL 5D
STANDARD 'V' DITCH
(Not to Scale)



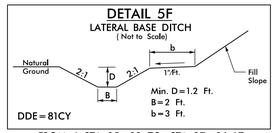
FROM Y4 STA. 12+59, 47' RT
TO STA. 12+65, 92' RT
L=45', S=0.33%, DDE=6 CY

DETAIL 5E
PIPE INLET/OUTLET BANK STABILIZATION
(Not to Scale)



L STA. 27+55 LT, L=30', d=2.8',
28 Tons RipRap, 56 SY Geotextile, DDE=19CY
L STA. 28+21 RT, L=12', d=1.0'
9 Tons RipRap, 24 SY Geotextile, DDE=9CY

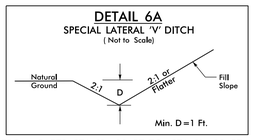
DETAIL 5F
LATERAL BASE DITCH
(Not to Scale)



DDE=81CY

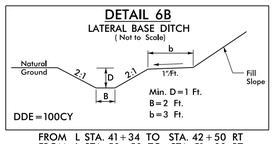
FROM L STA. 25+22 TO STA. 27+36 LT.

DETAIL 6A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM RABT2 STA. 11+00 RT TO STA. 11+32 RT
FROM Y5 STA. 14+21 LT TO STA. 15+10 RT

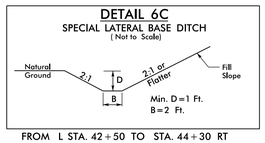
DETAIL 6B
LATERAL BASE DITCH
(Not to Scale)



DDE=100CY

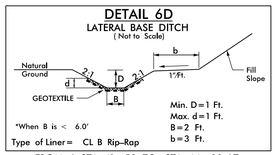
FROM L STA. 41+34 TO STA. 42+50 RT
FROM L STA. 50+50 TO STA. 51+00 RT

DETAIL 6C
SPECIAL LATERAL BASE DITCH
(Not to Scale)



FROM L STA. 42+50 TO STA. 44+30 RT

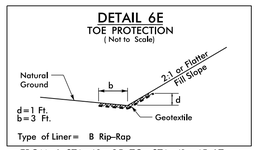
DETAIL 6D
LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CL B Rip-Rap

FROM L STA. 41+50 TO STA. 44+00 LT
112 TONS CL B RIP RAP, 318 SY GEOTEXTILE, DDE=72CY
FROM L STA. 48+13 TO STA. 50+50 RT
107 TONS CL B RIP RAP, 301 SY GEOTEXTILE, DDE=65CY

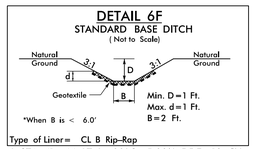
DETAIL 6E
TOE PROTECTION
(Not to Scale)



Type of Liner= B Rip-Rap

FROM L STA. 40+85 TO STA. 41+45 LT.

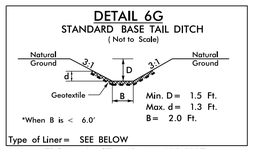
DETAIL 6F
STANDARD BASE DITCH
(Not to Scale)



Type of Liner= CL B Rip-Rap

L STA. 41+44 LT, L=22', S=5.83%, DDE=13 CY
57 TONS CL B RIP RAP, 38 SY GEOTEXTILE

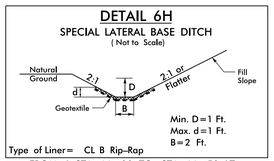
DETAIL 6G
STANDARD BASE TAIL DITCH
(Not to Scale)



Type of Liner= SEE BELOW

FROM -L- STA. 49+44, 109.5' LT
TO STA. 50+04, 458.6' LT
Total L=349', DDE=126CY (APPROX)
-L- STA. 49+44 TO 49+51
L=50'@S=8.58%, 49 TONS CL I RIP RAP, 90 SY GEOTEXTILE
-L- STA. 49+51 TO 49+65
L=87'@S=3.87%, 86 TONS CL I RIP RAP, 156 SY GEOTEXTILE
-L- STA. 49+65 TO 49+75
L=60'@S=1.07%, 59 TONS CL I RIP RAP, 108 SY GEOTEXTILE
-L- STA. 49+75 TO 50+04
L=152'@S=6.50%, 149 TONS CL I RIP RAP, 273 SY GEOTEXTILE

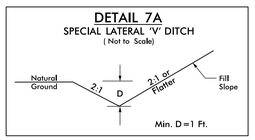
DETAIL 6H
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CL B Rip-Rap

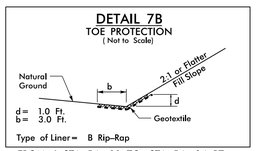
FROM L STA. 44+00 TO STA. 44+50 LT
23 TONS CL B RIP RAP, 64 SY GEOTEXTILE

DETAIL 7A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM Y7 STA. 11+50 TO STA. 12+74 LT
FROM L STA. 67+50 TO STA. 69+71 RT

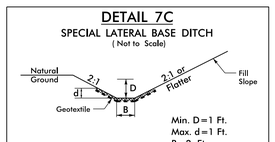
DETAIL 7B
TOE PROTECTION
(Not to Scale)



Type of Liner= B Rip-Rap

FROM L STA. 54+00 TO STA. 54+34 RT.
FROM Y7 STA. 11+30 TO STA. 11+46 RT.

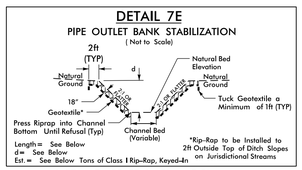
DETAIL 7C
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Type of Liner= CL B Rip-Rap

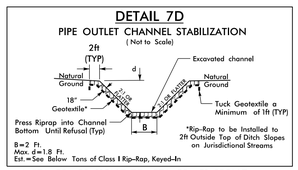
FROM L STA. 54+34 TO STA. 56+50 RT
97 TONS CL B RIP RAP, 274 SY GEOTEXTILE

DETAIL 7E
PIPE OUTLET BANK STABILIZATION
(Not to Scale)



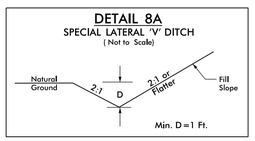
L STA. 67+05 RT, L=8', d=2.0',
8 Tons RipRap, 12 SY Geotextile

DETAIL 7D
PIPE OUTLET CHANNEL STABILIZATION
(Not to Scale)



L STA. 53+50, 115' LT TO STA. 53+51, 128' LT
L=15', S=1.7%, DDE=14 CY
17 Tons RipRap, 26 SY Geotextile

DETAIL 8A
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



FROM L STA. 67+50 TO STA. 69+71 RT

6/21/00

COMPUTED BY: T. NGUYEN DATE: 02/02/2024
CHECKED BY: A. CONRAD DATE: 02/02/2024

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
U-5536	3B-1

SUMMARY OF EARTHWORK (CY)

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
–L– 10+77.76 – 12+33.25	27		285	258	
–L– 13+72.93 – 39+65.26	2,885		13,977	11,092	
–L– 41+05.26 – 57+97.45	479		64,287	63,808	
–L– 59+37.47 – 70+44.54	207		2,900	2,693	
–Y1A– 11+35.00 – 12+94.82	35		43	8	
–Y1A– 14+24.82 – 16+00.00	77		33		44
SUBTOTAL	3,710	0	81,526	77,859	44
–Y1B– 10+18.23 – 16+87.63	315		699	384	
–Y2 10+75.19 – 12+49.56	223		167		56
–Y3– 11+18.91 – 15+82.80	121		621	500	
–Y4– 10+17.67 – 13+51.18	722	1,010	1,454	732	1,010
–Y5– 11+37.35 – 12+32.24	78		24		54
–Y5– 13+62.24 – 15+22.77	24		1,343	1,319	
SUBTOTAL	1,483	1,010	4,308	2,935	1,120
–Y6– 10+18.02 – 12+62.67	39		192	153	
–Y6– 12+98.68 – 14+30.00	11		17	6	
–Y7– 10+18.12 – 12+91.42	197	915	2,065	1,868	915
–Y8– 12+10.10 – 15+74.89	292		183		109
–Y8– 17+14.88 – 18+33.32	103		183	80	
–Y9– 12+15.00 – 12+97.27	13		8		5
SUBTOTAL	655	915	2,648	2,108	1,029
–Y9– 13+34.03 – 13+95.00	36		18		18
–Y10– 11+95.00 – 12+87.42	33		5		28
–Y10– 13+23.61 – 13+76.19	45		5		40
–RABT1– 10+00.00 – 13+26.72	286		1,405	1,119	
–RABT2– 10+00.00 – 13+26.72	21		3,625	3,604	
–RABT3– 10+00.00 – 12+95.30	173		1,350	1,177	
–RABT4– 10+00.00 – 13+26.72	179		2,415	2,236	
SUBTOTAL	773	0	8,822	8,136	86
TOTAL	6,621	1,925	97,304	91,038	2,279
ADDITIONAL UNDERCUT		3,825	4,399	4,399	3,825
SELECT GRANULAR MAT. IN LIEU OF BORROW			–4,025	–4,025	
WASTE IN LIEU OF BORROW				–353	–353
PROJECT TOTAL	6,621	5,750	97,678	91,059	5,750
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				4,553	
GRAND TOTAL	6,621	5,750	97,678	95,612	5,750
SAY	7,000	5,750		96,000	

UNCLASSIFIED EXCAVATION – ACCEPTABLE, BUT NOT TO BE PLACED IN THE TOP 3' OF EMBANKMENT OR BACKFILL: –L– STA. 21+75.00 TO –L– STA. 24+25.00 (600 CY), CONTINGENCY (500 CY) PER GEOTECH = 1,100 CY TOTAL

UNDERCUT (BY STATIONS) = 1,925 CY
UNDERCUT (CONTINGENCY) = 3,825 CY
TOTAL UNDERCUT = 5,750 CY
SELECT GRANULAR MATERIAL (BY STATIONS) = 3,500 CY
SELECT GRANULAR MATERIAL (CONTINGENCY) = 2,000 CY TOTAL
SELECT GRANULAR MATERIAL = 5,500 CY

SUMMARY OF PAVEMENT REMOVAL (SY)

LINE	STATION – STATION	LOCATION	REMOVAL (SY)
–Y1B–	STA. 15+61 +/– TO 16+04 +/–	RT	50
–Y1B–	STA. 16+32 +/– TO 16+96 +/–	RT	336
–L–	STA. 36+11 +/– TO 39+49 +/–	RT	296
–L–	STA. 66+99 +/– TO 67+15 +/–	RT	4
GRAND TOTAL			686
SAY			690

NOTE: Earthwork quantities are calculated by the Engineer. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

Note: Approximate quantities only. Unclassified Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

SYSTIME = 5/24/2024 11:55:36 Rdy_sum_3B-1.dgn
ITS_EF_02_01_08.dgn

LINDA092017-PC

COMPUTED BY:	LMJ	**DATE:**	12-05-24
CHECKED BY:	WHT	**DATE:**	12-05-24

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-5536	3D-1

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".**

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET	STRUCTURE NUMBER		TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	MINIMUM REQUIRED SLOPE	Drainage Pipe (RCP, CSP, HDPE, PVC, or PP PIPE)									C. S. PIPE				R. C. PIPE CLASS III						R. C. PIPE CLASS IV						R. C. PIPE CLASS V				
SIZE								15	18	24	30	36					15	18	24		15	18	24	30	36		15	18	24	30	36		15	18	24		
THICKNESS OR GAUGE		FROM	TO	FT.	FT.	FT.	%						DO NOT USE RCP	DO NOT USE HDPE	DO NOT USE PVC	DO NOT USE PP PIPE	.064	.064	.064																		
L 21+52	18 RT	0400		951.8																																	
		0400	0401		948.8	948.5																					40										
L 21+52	18 LT	0401		951.5																																	
		0401	0502		948.5	943.0																					368										
L 18+39	24 LT	0402		941.3																																	
		0402	0403		938.3	938.1																					8										
L 18+28	24 LT	0403		941.1																																	
		0403	0404		938.1	937.4																					152										
L 18+28	24 LT	0404		948.9																																	
		0404	0405		937.4	932.1		32					X																								
L 17+60	37 RT	0406		936.9																																	
		0406	0407		934.9	934.8				24																											
L 17+54	18 RT	0407		938.9																																	
		0407	0412		934.8	932.7																							144								
L 14+86	36 RT	0409		936.4																																	
		0409	0410		934.9	933.7			16																												
L 14+86	20 RT	0410		937.0																																	
		0410	0411		933.7	933.1																						88									
L 15+76	19 RT	0411		936.4																																	
		0411	0412		933.1	933.0	0.4																					32									
L 16+06	18 RT	0412		936.5																																	
		0412	0413		932.5	931.2	0.5																						72								
Y3 11+66	35 RT	0414			946.3																																
		0414	0415		943.2	940.0															96																
Y3 12+61	17 RT	0415		943.0																																	
		0415	0416		940.0	938.4																											48				
Y3 12+67	34 LT	0416		941.4																																	
		0416	0419		938.4	937.4																					240										
Y3 15+61	36 RT	0417		940.9																																	
		0417	0418		937.9	937.6																					64										
Y3 15+00	20 RT	0418		941.0																																	
		0418	0419		937.7	937.4																					36										
Y3 15+00	20 LT	0419		941.0																																	
		0419	0420		937.4	937.0																					88										
Y3 15+79	50 LT	0420		940.8																																	
		0420	0421		937.0	936.8	0.3																				48										
L 11+91	25 RT	0421		939.3																																	
		0421	0422		936.8	936.5																											48				
L 11+85	22 LT	0422		938.8																																	
		0422	0423		936.5	936.2																											56				
L 12+35	50 LT	0423		938.5																																	
		0423	0424		936.2	933.4		56																													
Y2 11+15	43 LT	0424		935.3																																	
		0424	0425		933.4	933.1																											56				
L 11+24	37 RT	0433		938.0																																	
		0433	0434		935.8	934.5		24																													
L 11+09	25 RT	0434		937.5																																	
		0434	0435		934.5	934.4																					40										
L 11+11	15 LT	0435		937.7																																	
		0435	0436		934.4	934.3		12																													
SHEET TOTALS								124	16	24											96						1084	120	216				208				

LINE & STATION	FROM	TO	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE)	REINFORCED ENDWALLS	DRAINAGE STRUCTURE	QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)			C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03				CONCRETE TRANSITIONAL SECTION		OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	M.H. FRAME AND COVER STD. 840.54	ADJUST C.B.	15" DRAINAGE PIPE ELBOW		PIPE CLEANOUT	FLOWABLE FILL	CONCRETE COLLARS CL. "B" STD. 840.72	CONCRETE AND BRICK PIPE PLUG STD. 840.71	PIPE REMOVAL	REMARKS
							MASONRY	0' THRU 5'	A 5' THRU 10'	B 10' AND ABOVE		GRATE TYPE E	F	G		D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05																													
					CY	CY	CY	EACH	LIN. FT.	LIN. FT.																															EACH	CY	CY	CY	LIN. FT.	
L 21+52	0400							1			1			1																																
	0400	0401																																												
L 21+52	0401							1			1		1																																	
	0401	0502																																												
L 18+39	0402							1			1		1																																	
	0402	0403																																												
L 18+28	0403							1			1		1																																	
	0403	0404																																												
L 18+28	0404							1	5.0	1.5	1		1																																	
	0404	0405																																			2							
L 17+60	0406																																													
	0406	0407																																												
L 17+54	0407							1			1			1																																
	0407	0412																																												
L 14+86	0409																																													
	0409	0410																																												
L 14+86	0410							1			1		1																																	
	0410	0411																																												
L 15+76	0411							1			1	1																																		
	0411	0412																																												
L 16+06	0412							1			1			1																																
	0412	0413																																												
Y3 11+66	0414							1											1	1																										
	0414	0415																																												
Y3 12+61	0415							1			1		1																																	
	0415	0416																																												
Y3 12+67	0416							1			1			1																																
	0416	0419																																												
Y3 15+61	0417							1			1	1																																		
	0417	0418																																												
Y3 15+00	0418							1			1		1																																	
	0418	0419																																												
Y3 15+00	0419							1			1			1																																
	0419	0420																																												
Y3 15+79	0420							1			1			1																																
	0420	0421																																												
L 11+91	0421							1			1			1																																MIN D CB
	0421	0422																																												
L 11+85	0422							1			1		1																																	MIN D CB
	0422	0423																																												
L 12+35	0423							1			1			1																																MIN D CB
	0423	0424																																												
Y2 11+15	0424							1											1	1																										MIN D DI
	0424	0425																																												
L 11+24	0433							1											1	1																										
	0433	0434																																												
L 11+09	0434							1			1			1																																
	0434	0435																																												
L 11+11	0435							1			1		1																																	
	0435	0436																																												
SHEET TOTALS								23	5.0	1.5	20	2	9	9					3	3																			2							

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

LINDA092017-PC

COMPUTED BY:	LMJ	DATE:	12-05-24
CHECKED BY:	WHT	DATE:	12-05-24

PROJECT NO.	SHEET NO.
U-5536	3D-2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".**

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, HDPE, PVC, or PP PIPE) 15	Drainage Pipe 18	Drainage Pipe 24	Drainage Pipe 30	Drainage Pipe 36	DO NOT USE RCP	DO NOT USE HDPE	DO NOT USE PVC	DO NOT USE PP PIPE	C. S. PIPE 15 .064	C. S. PIPE 18 .064	C. S. PIPE 24 .064	R. C. PIPE CLASS III 15	R. C. PIPE CLASS III 18	R. C. PIPE CLASS III 24	R. C. PIPE CLASS III 30	R. C. PIPE CLASS III 36	R. C. PIPE CLASS IV 15	R. C. PIPE CLASS IV 18	R. C. PIPE CLASS IV 24	R. C. PIPE CLASS IV 30	R. C. PIPE CLASS IV 36	R. C. PIPE CLASS V 15	R. C. PIPE CLASS V 18	R. C. PIPE CLASS V 24
L 11+11	27 LT	0436		937.2																												
Y2 11+77	19 LT	0428		935.7																												
		0428	0429		933.5	933.0		16																								
Y2 12+24	14 RT	0430		934.4																												
		0430	0431		932.2	932.0																			24							
L 25+11	49 RT	0500		950.7																												
		0500	0501		949.2	948.1	0.3		24																							
L 25+11	30 RT	0501		952.4																												
		0501	0502		948.1	945.0	0.4																			56						
L 25+23	24 LT	0502		952.5																												
		0502	0503		942.6	941.4	0.5		48																							
L 28+21	63 RT	0505		944.8																												
		0505	0528		942.3	942.2																	36									
Y4 12+60	13 LT	0508		952.3																												
		0508	0509		950.0	949.9																								20		
Y4 12+82	13 LT	0509		952.2																												
		0509	0510		949.9	949.9																								24		
Y4 12+82	13 RT	0510		952.2																												
		0510	0511		949.9	949.7		28																								
Y4 12+59	27 RT	0511		952.0																												
		0511	0512		949.7	949.7		20																								
Y9 13+55	31 RT	0513		951.2																												
		0513	0515		948.2	948.1																								32		
L 32+17	24 LT	0514		953.9																												
		0514	0515		950.9	949.7																								40		
L 31+75	18 LT	0515		952.7																												
L 31+74	14 RT	0516		946.2																												
		0516	0517		944.7	944.5														16												
L 31+75	30 RT	0517		952.4																												
		0517	0518		944.5	944.3														44												
Y9 12+62	26 RT	0518		950.2																												
Y9 12+20	36 RT	0519		950.5																												
		0519	0520		948.3	946.7		12																								
Y9 12+20	26 RT	0520		949.7																												
		0520	0521		946.7	946.4																								56		
Y9 12+26	28 LT	0521		949.7																												
		0521	0522		946.4	946.2																								40		
Y9 12+62	14 LT	0522		950.1																												
		0522	0523		942.7	942.6																56										
L 30+61	30 RT	0523		951.4																												
		0523	0524		942.6	942.5																32										
L 30+30	30 RT	0524		950.0																												
		0524	0529		942.5	942.2																48										
L 27+87	24 LT	0527		950.7																												
		0527	0506		939.7	938.5	0.4					56																				
L 28+21	30 RT	0528		952.2																												
		0528	0542		941.4	940.4																56										
L 28+27	0 CL																															
L 30+30	18 LT	0529		950.2																												
		0529	0530		942.2	942.1																32										
SHEET TOTALS								76	72			56									60		260		24	56				212		

LINE & STATION	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	CONCRETE TRANSITIONAL SECTION C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	M.H. FRAME AND COVER STD. 840.54	ADJUST C.B.	15" DRAINAGE PIPE ELBOW	PIPE CLEANOUT EACH	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 11+11	0436							1										1	1																									
Y2 11+77	0428							1			1			1																														MIN D CB
	0428	0429																																										
Y2 12+24	0430							1			1		1																															
	0430	0431																																										
L 25+11	0500																																											
	0500	0501																																										
L 25+11	0501							1			1		1																															
	0501	0502																																										
L 25+23	0502							1	4.9		1	1																																
	0502	0503																																										
L 28+21	0505																																											
	0505	0528																																										
Y4 12+60	0508							1			1			1																														MIN D CB
	0508	0509																																										
Y4 12+82	0509							1			1	1																																MIN D CB
	0509	0510																																										
Y4 12+82	0510							1			1	1																																MIN D CB
	0510	0511																																										
Y4 12+59	0511							1			1	1																																MIN D CB
	0511	0512																																										
Y9 13+55	0513							1			1	1																																
	0513	0515																																										
L 32+17	0514							1			1	1																																
	0514	0515																																										
L 31+75	0515							1	2.7		1		1																															
L 31+74	0516																																								0.4465			
	0516	0517																																										
L 31+75	0517							1	3.0		1			1																														
	0517	0518																																										
Y9 12+62	0518													1																								1							CB needs new Type G grate
Y9 12+20	0519							1										1	1																									
	0519	0520																																										
Y9 12+20	0520							1			1	1																																
	0520	0521																																										
Y9 12+26	0521							1			1	1																																
	0521	0522																																										
Y9 12+62	0522							1	2.4		1		1																															
	0522	0523																																										
L 30+61	0523							1	3.8		1			1																														
	0523	0524																																										
L 30+30	0524							1	2.6		1	1																																
	0524	0529																																										
L 27+87	0527							1	5.0	1.1	1			1																														
	0527	0506																																										
L 28+21	0528							1	5.0	0.7	1		1																															
	0528	0542																																										
L 28+27																																							24				Exist. 36" RCP
L 30+30	0529							1	3.0		1		1																															
	0529	0530																																										
SHEET TOTALS								22	32.4	1.8	20	9	6	6				2	2																			1			24	0.4465			

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

LINDA092017-PC

COMPUTED BY: LMJ **DATE:** 12-05-24

CHECKED BY: WHT **DATE:** 12-05-24

PROJECT NO.	SHEET NO.
U-5536	3D-3

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION SIZE THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, HDPE, PVC, or PP PIPE) 15	18	24	30	36	DO NOT USE RCP	DO NOT USE HDPE	DO NOT USE PVC	DO NOT USE PP PIPE	C. S. PIPE 15 .064	18 .064	24 .064		R. C. PIPE CLASS III 15	18	24	30	36		R. C. PIPE CLASS IV 15	18	24	30	36		R. C. PIPE CLASS V 15	18	24			15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	M.H. FRAME AND COVER STD. 840.54	ADJUST C.B.	15" DRAINAGE PIPE ELBOW		PIPE CLEANOUT EACH	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 30+00	24 LT	0530		949.9																																							1	2.9		1	1																																	
		0530	0531		942.1	941.8																		48																																																									
L 29+50	24 LT	0531		950.0																																							1	3.2		1			1																																
		0531	0542		941.8	941.2																		128																																																									
L 30+56	49 RT	0532		947.8																																																																																
		0532	0523		946.6	946.5		24																																																																												
L 30+56	24 LT	0542		950.5																																							1	5.0	0.2	1			1																																
		0542	0527		940.4	939.7																			32																																																							
L 37+23	24 LT	0533		965.1																																							1			1	1																																	MIN D CB
		0533	0534		962.9	962.1																												40																																															
L 37+65	18 LT	0534		965.1																																							1			1	1																																	
		0534	0536		962.1	961.9																												48																																															
L 37+65	30 RT	0536		964.9																																							1			1	1																																	
		0536	0537		961.9	961.7	0.4																											40																																															
L 37+25	36 RT	0537		964.9																																							1			1	1																																	
		0537	0539		961.5	961.2			104																																																																											
Y10 12+64	21 LT	0538		965.6																																							1			1			1																																
		0538	0540		962.2	962.0																						44																																																									
L 36+21	51 RT	0539		965.3																																							1											1	1																											
		0539	0540		961.2	961.1	0.5		16																																																																											
Y10 12+57	23 RT	0540		965.7																																							1			1		1																																	
		0540	0541		961.1	961.0	0.6																	8																																																												
L 36+05	41 RT	0541		962.5																																																																												0.4465			
Y5 12+26	41 LT	0601		972.4																																							1			1	1																																	
		0601	0602		969.4	969.2																						40																																																									
Y1A 12+92	42 RT	0602		972.3																																							1	0.2		1	1																																	
		0602	0603		969.2	969.0																						48																																																									
Y1A 12+48	32 RT	0603		972.9																																							1			1			1																																
		0603	0604		969.0	968.7		16																																																																												
Y1A 12+42	20 RT	0604		971.7																																							1			1			1																																
Y1A 15+00	30 RT	0605		974.5																																							1			1	1																																	
		0605	0607		969.9	969.8		12																																																																												
Y1A 15+18	20 RT	0606		972.8																																							1			1			1																																
		0606	0607		969.8	969.8																												16																																															
Y1A 15+00	20 RT	0607		972.8																																							1			1	1																																	
		0607	0608		969.8	969.6																												36																																															
Y1A 14+63	19 RT	0608		970.8																																																																												0.3990			
RABT3 10+03	22 RT	0609		973.7																																							1			1		1																																	
		0609	0610		970.3	970.2																						28																																																										
RABT3 10+10	5 LT	0610		974.8																																							1	1.2																										1	1									
Y1A 14+26	34 LT	0611		972.2																																							1			1		1																																	
		0611	0612		968.8	968.6																						36																																																										
RABT3 10+57	8 LT	0612		973.4																																							1	0.3																										1	1									
Y5 14+36	20 LT	0613		967.3																																							1			1			1																																
		0613	0615		964.0	963.2																						48																																																										
Y5 14+75	38 LT	0614		963.8																																							1											1	1																											MIN D DI
		0614	0615		961.9	961.8		20																																																																												
Y5 14+84	21 LT	0615		966.6																																							1			1	1																																	
		0615	0616		961.8	961.5	0.4																					48																																																										
Y5 14+84	21 RT	0616		966.1																																							1			1		1																																	
SHEET TOTALS								72	120													8		176	32		292						180										25	12.8	0.2	21	10	4	7					2	2															2	2						0.8455			

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

LINDA092017-PC

COMPUTED BY:	LMJ	**DATE:**	12-05-24
CHECKED BY:	WHT	**DATE:**	12-05-24

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-5536	3D-4

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET	STRUCTURE NUMBER		TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	MINIMUM REQUIRED SLOPE	Drainage Pipe (RCP, CSP, HDPE, PVC, or PP PIPE)									C. S. PIPE				R. C. PIPE CLASS III						R. C. PIPE CLASS IV						R. C. PIPE CLASS V					15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE)	REINFORCED ENDWALLS	DRAINAGE STRUCTURE	QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)			C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03				CONCRETE TRANSITIONAL SECTION		OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	M.H. FRAME AND COVER STD. 840.54	ADJUST C.B.	15" DRAINAGE PIPE ELBOW		PIPE CLEANOUT	FLOWABLE FILL	CONCRETE COLLARS CL. "B" STD. 840.72	CONCRETE AND BRICK PIPE PLUG STD. 840.71	PIPE REMOVAL	REMARKS
SIZE		FROM	TO					15	18	24	30	36	DO NOT USE RCP	DO NOT USE HDPE	DO NOT USE PVC	DO NOT USE PP PIPE	15	18	24		15	18	24	30	36		15	18	24	30	36		15	18	24							MASONRY	0' THRU 5'	A 5' THRU 10'	B 10' AND ABOVE		GRATE TYPE				D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05																													
THICKNESS OR GAUGE				FT.	FT.	FT.	%										.064	.064	.064																					CY	CY	CY	EACH	LIN. FT.	LIN. FT.		E	F	G																										EACH	CY	CY	CY	LIN. FT.	
		0616	0617		961.5	961.2	0.8																				24																																																						
Y5 15+10	28 RT	0617		966.2																																							1			1	1																																		
		0617	0618		961.2	957.3	0.9	24																																																																									
RABT2 11+88	48 RT	0618		961.0																																							1	0.6																									1			1									
		0618	0620		955.4	953.0				40																																																																						18	
RABT2 12+05	66 RT	0619		954.4																																																																								1					EXIST 12" CMP
		0619	0620		952.9	952.7			16																																																																								
L 41+27	51 RT	0620		958.5																																							1	5.0																									1			1									
		0620	0698		948.5	934.7	0.4																						140																																																				
L 38+10	30 RT	0622		965.0																																							1			1			1																																MIN D CB
		0622	0536		962.7	961.9																											44																																																
L 42+85	24 RT	0623		964.6																																							1			1			1																																
		0623	0697		961.6	961.0																					64																																																						
L 42+24	32 RT	0697		964.0																																							1			1			1																																
		0697	0624		961.0	960.7																					24																																																						
L 42+49	55 RT	0696							88																																																																								
L 42+04	24 RT	0624		964.2																																							1			1	1																																		
		0624	0627		960.7	960.5																					48																																																						
L 42+50	24 LT	0625		964.3																																							1			1		1																																	
		0625	0627		960.9	960.7																					48																																																						
L 41+50	20 LT	0626		964.4																																							1			1			1																																
		0626	0627		961.0	960.8																					56																																																						
L 42+04	22 LT	0627		964.2																																							1			1	1																																		
		0627	0628		960.5	938.1	0.4	72					X																																																													2							
Y6 12+29	27 RT	0629		972.4																																							1											1	1																										
		0629	0631		970.2	968.8		16																																																																									
Y6 12+40	17 LT	0630		971.5																																							1			1			1																																
		0630	0631		968.1	967.9																					32																																																						
Y6 12+40	18 RT	0631		971.8																																							1			1		1																																	
		0631	0639		967.9	965.8																					84																																																					33	Exist 12" RCP
L 49+33	83 RT	0633		942.0																																																																													
		0633	0634		940.5	926.8	0.3																					196																																																				392	
L 50+00	30 LT	0636		957.6																																							1			1			1																																
		0636	0637		954.2	950.8																					112																																																						
L 51+11	30 LT	0637		954.2																																							1	0.3		1			1																																
		0637	0638		948.9	946.0	0.3	36																																																																									
Y6 13+26	13 RT	0639		968.8																																							1			1		1																																	
Y6 10+50	13 RT	0640		971.8																																							1			1			1																																
		0640	0641		968.4	968.3																					24																																																						
Y6 10+50	13 LT	0641		972.2																																							1			1		1																																	
		0641	0642		968.3	967.5																					40																																																						
Y6 10+21	38 LT	0642		970.1																																																																					1								
Y6 13+20	19 LT	0643		968.6																																							1			1			1																																
		0643	0644		965.6	964.9		56																																																																									
Y1A 12+94	32 RT	0646		973.1																																							1			1			1																																
		0646	0604		970.1	968.7																					52																																																					64	
L 41+43	89 LT	0698		939.1																																							1																										1			1									
		0698	0621		934.1	934.0	0.4			16																																																																							
L 51+67	30 LT	0701		952.6																																							1			1	1																																		
		0701	0637		949.2	948.9																					56																																																						
						SHEET TOTALS		204	104	56																	664	196	140				44										22	5.9		18	4	4	10					1	1														3			3	1	2		1				507	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

LINDA092017-PC

COMPUTED BY: LMJ DATE: 12-05-24
CHECKED BY: WHT DATE: 12-05-24

PROJECT NO.	SHEET NO.
U-5536	3D-5

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".**

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET	STRUCTURE NUMBER		TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	MINIMUM REQUIRED SLOPE	Drainage Pipe (RCP, CSP, HDPE, PVC, or PP PIPE)									C. S. PIPE			R. C. PIPE CLASS III					R. C. PIPE CLASS IV					R. C. PIPE CLASS V		
SIZE								15	18	24	30	36					15	18	24	15	18	24	30	36	15	18	24	30	36	15	18	24
THICKNESS OR GAUGE		FROM	TO	FT.	FT.	FT.	%						DO NOT USE RCP	DO NOT USE HDPE	DO NOT USE PVC	DO NOT USE PP PIPE	.064	.064	.064													
L 52+17	24 RT	0702		951.3																												
		0702	0703		946.3	945.0		20																								
L 52+17	45 RT	0703		947.2																												
		0703	0704		945.0	944.8		32																								
Y7 12+33	49 LT	0704		946.7																												
		0704	0706		944.8	944.6		28																								
Y7 11+68	28 LT	0705		949.1																												
		0705	0706		945.7	945.5																			48							
Y7 12+15	28 LT	0706		949.4																												
		0706	0708		944.6	944.4	0.4																		44							
Y7 11+68	19 RT	0707		949.2																												
		0707	0708		945.9	944.4																			48							
Y7 12+15	19 RT	0708		949.1																												
		0708	0709		944.2	943.8			80																							
L 53+20	24 RT	0709		948.4																												
		0709	0722		943.8	943.3																				100						
Y8 15+22	21 LT	0711		954.0																												
		0711	0715		950.7	950.2																			72							
L 56+80	21 LT	0712		950.2																												
		0712	0716		946.6	946.0																			128							
L 56+80	20 RT	0713		950.2																												
		0713	0712		946.8	946.6																			40							
RABT4 12+53	47 RT	0714		946.8																												
RABT4 12+52	31 RT	0715		953.6																												
		0715	0713		950.2	946.8																			120							
L 57+97	47 LT	0716		952.2																												
		0716	0717		946.0	945.0													112													
Y8 17+76	20 LT	0717		948.0																												
		0717	0718		945.0	944.1																			36							
Y8 17+83	18 RT	0718		947.5																												
		0718	0719		943.9	936.8													232													
Y8 20+18	18 RT	0719		940.1																												
		0719	E701		936.8	934.2	0.9														80											
L 54+20	24 RT	0722		946.9																												
		0722	0724		938.9	938.7																						60				
L 54+60	24 RT	0723		946.9																												
		0723	0722		942.9	942.7																			40							
L 53+92	30 LT	0724		947.1																												
		0724	0728		938.7	918.2					76																					
L 54+60	30 LT	0725		946.7																												
		0725	0724		942.7	942.5																			68							
L 54+34	52 RT	0727		941.5																												
		0727	0722		939.0	938.9																32										
L 53+53	96 LT	0728		923.2																												
		0728	0729		914.0	914.0					20																					
L 61+22	21 RT	0750		943.9																												
		0750	0780		938.0	937.8																							44			
L 61+70	21 RT	0751		943.7																												
		0751	0750		940.4	939.5	0.4														44											
L 61+82	21 RT	0752		943.7																												
							SHEET TOTALS	80	80		96										468		32		644	100		60	44			

LINE & STATION	OFFSET	FROM	TO	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) A 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	M.H. FRAME AND COVER STD. 840.54	ADJUST C.B.	15" DRAINAGE PIPE ELBOW	PIPE CLEANOUT EACH	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 52+17	24 RT	0702							1			1		1																															
		0702	0703																																										
L 52+17	45 RT	0703							1										1	1																									
		0703	0704																																										
Y7 12+33	49 LT	0704							1										1	1																									MIN D DI
		0704	0706																																										
Y7 11+68	28 LT	0705							1			1	1																																
		0705	0706																																										
Y7 12+15	28 LT	0706							1			1		1																															
		0706	0708																																										
Y7 11+68	19 RT	0707							1			1		1																															
		0707	0708																																										
Y7 12+15	19 RT	0708							1			1	1																																
		0708	0709																																										
L 53+20	24 RT	0709							1			1		1																															
		0709	0722																																										
Y8 15+22	21 LT	0711							1			1			1																														
		0711	0715																																										
L 56+80	21 LT	0712							1			1		1																															
		0712	0716																																										
L 56+80	20 RT	0713							1			1			1																														
		0713	0712																																										
RABT4 12+53	47 RT	0714																																											
RABT4 12+52	31 RT	0715							1			1			1																														
		0715	0713																																										
L 57+97	47 LT	0716							1	1.2		1		1																															
		0716	0717																																										
Y8 17+76	20 LT	0717							1			1			1																														
		0717	0718																																										
Y8 17+83	18 RT	0718							1			1		1																															
		0718	0719																																										
Y8 20+18	18 RT	0719							1			1		1																															
		0719	E701																																										
L 54+20	24 RT	0722							1	3.1		1		1																															
		0722	0724																																										
L 54+60	24 RT	0723							1			1	1																																
		0723	0722																																										
L 53+92	30 LT	0724							1	3.4		1			1																														
		0724	0728																																										
L 54+60	30 LT	0725							1			1	1																																
		0725	0724																																										
L 54+34	52 RT	0727																																											
		0727	0722																																										
L 53+53	96 LT	0728							1	5.0	0.5																									1			1								
		0728	0729																																										
L 61+22	21 RT	0750							1	1.0		1		1																															
		0750	0780																																									36	
L 61+70	21 RT	0751							1			1	1																																
		0751	0750																																										
L 61+82	21 RT	0752							1			1			1																														
SHEET TOTALS									24	13.7	0.5	21	5	10	6				2	2																1			1									36	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

LINDA092017-PC

COMPUTED BY:	LMJ	DATE:	12-05-24
CHECKED BY:	WHT	DATE:	12-05-24

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-5536	3D-6

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION SIZE THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, HDPE, PVC, or PP PIPE) 15	Drainage Pipe 18	Drainage Pipe 24	Drainage Pipe 30	Drainage Pipe 36	DO NOT USE RCP	DO NOT USE HDPE	DO NOT USE PVC	DO NOT USE PP PIPE	C. S. PIPE 15 .064	C. S. PIPE 18 .064	C. S. PIPE 24 .064		R. C. PIPE CLASS III 15	R. C. PIPE CLASS III 18	R. C. PIPE CLASS III 24	R. C. PIPE CLASS III 30	R. C. PIPE CLASS III 36		R. C. PIPE CLASS IV 15	R. C. PIPE CLASS IV 18	R. C. PIPE CLASS IV 24	R. C. PIPE CLASS IV 30	R. C. PIPE CLASS IV 36		R. C. PIPE CLASS V 15	R. C. PIPE CLASS V 18	R. C. PIPE CLASS V 24			15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	CONCRETE TRANSITIONAL SECTION C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	M.H. FRAME AND COVER STD. 840.54	ADJUST C.B.	15" DRAINAGE PIPE ELBOW		PIPE CLEANOUT EACH	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
		0752	0751		940.4	940.4																12																																																												
L 63+30	21 RT	0753		945.7																																							1			1			1																																	
		0753	0752		942.7	940.7															140																																																													
L 61+70	0 CL	0754		944.8																																							1								1			1	1																												
		0754	0751		941.8	940.7															20																																																													
L 63+30	0 CL	0755		946.8																																							1								1			1	1																												
		0755	0753		943.8	942.7															20																																																													
L 59+79	23 RT	0758		948.0																																							1			1		1																																		
		0758	0779		945.0	944.8															56																																																													
RABT4 10+81	37 RT	0759		949.2																																							1			1			1																																	
		0759	0779		946.2	944.8															52																																																												
L 67+15	20 LT	0760		946.6																																							1			1			1																																	
		0760	0761		943.8	942.2																					52																																																							
L 66+58	20 LT	0761		947.4																																							1	2.0		1			1																																	
		0761	0762		940.4	939.5															16																																																										137	
L 66+59	36 LT	0762		943.7																																							1											1	1																												
Y1B 11+87	19 RT	0763		957.2																																							1			1		1																																		
		0763	0782		954.2	953.6															52																																																													
Y1B 13+07	19 RT	0764		955.6																																							1			1		1																																		
		0764	0766		952.6	950.6	0.6														96																																																										64	
Y1B 13+07	24 LT	0765		955.7																																							1			1			1																																	
		0765	0764		952.7	952.6															40																																																													
Y1B 14+06	16 RT	0766		953.6																																							1			1		1																																		
		0766	0768		950.6	949.6	0.9														64																																																												
Y1B 14+06	22 LT	0767		954.3																																							1			1			1																																	
		0767	0766		951.3	950.6															36																																																													
Y1B 14+70	15 RT	0768		952.6																																							1			1		1																																		
		0768	0769		949.6	946.5	1.4														100																																																												
Y1B 15+68	19 RT	0769		950.3																																							1			1		1																																	53	
		0769	0773		946.3	945.3	0.7		44																																																																											
Y1B 15+65	19 LT	0770		949.6																																							1			1			1																																	
		0770	0769		946.6	946.5															36																																																												
Y1B 12+42	26 RT	0771		956.3																																							1											1	1																												
		0771	0782		953.1	953.1															8																																																													
Y1B 14+04	26 RT	0772		953.7																																							1											1	1																												
		0772	0766		951.4	950.6															8																																																												
Y1B 16+02	46 RT	0773		947.8																																							1											1	1																												
		0773	0774		945.3	943.9	0.7		96																																																																											
Y1B 16+74	97 RT	0774		946.4																																							1											1	1																												
		0774	0781		943.4	943.3				52																																																																									
Y1B 16+61	24 LT	0776		947.7																																							1			1	1																																			
		0776	0778		944.6	944.2															76																																																													
Y1B 16+72	19 RT	0777		947.8																																							1			1	1																																			
		0777	0776		944.8	944.6															44																																																													
L 64+67	17 RT	0778		947.2																																							1			1			1																																	
		0778	0753		944.2	942.7															132																																																												
L 59+90	34 LT	0779		948.3																																							1			1			1																																	
		0779	0780		944.8	942.6															120																																																											70	
L 61+07	22 LT	0780		946.4																																							1	5.0	0.8																									1			1										
L 61+97	13 LT	0780	0757		935.6	935.5						36																																																																					18			46	Exist. 24" CMP
SHEET TOTALS									140	52		36									1116	12					52																25	7.0	0.8	17	2	6	9		2			7	7																1			1					18			370	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

LINDA092017-PC

COMPUTED BY:	LMJ	DATE:	12-05-24
CHECKED BY:	WHT	DATE:	12-05-24

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-5536	3D-7

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, HDPE, PVC, or PP PIPE)									C. S. PIPE				R. C. PIPE CLASS III						R. C. PIPE CLASS IV						R. C. PIPE CLASS V			
SIZE									15	18	24	30	36					15	18	24		15	18	24	30	36		15	18	24	30	36		15	18	24	
THICKNESS OR GAUGE														DO NOT USE RCP	DO NOT USE HDPE	DO NOT USE PVC	DO NOT USE PP PIPE	.064	.064	.064																	
L 62+73	0	CL																																			
L 67+02	33	RT	0781		947.7																																
		RT	0781	0775		943.3	943.3	0.3			8																										
Y1B 12+40	19	RT	0782		956.6																																
Y1B 12+91	12	RT	0782	0764		953.1	952.6	0.4														64															
L 68+28	20	LT	0801		945.5																																
			0801	0802		942.5	938.8															120															
L 69+50	19	LT	0802		941.8																																
			0802	0806		938.8	938.5															40															
L 69+78	42	LT	0806		941.5		938.5																														
L 69+71	28	RT	0804	0803		939.8	938.1		16																												
L 69+71	19	RT	0803		941.1																																
			0803	0805		938.1	937.9															60															
L 11+19	22	LT	0436																																		
L 11+54	21	LT	0422	0436																																	
L 12+38	0	CL																																			
Y3 12+89	24	LT																																			
Y3 12+87	21	RT																																			
Y4 11+93	25	LT	0507						36																												
Y4 11+65	26	LT																																			
L 28+06	0	CL																																			
L 29+36	40	RT																																			
L 30+45	39	RT																																			
L 31+58	37	RT																																			
L 35+83	42	RT																																			
RAB3 12+25	4	RT																																			
RAB3 12+03	7	RT																																			
RAB3 12+85	2	RT																																			
Y6 11+63	14	LT																																			
Y6 10+57	14	RT																																			
Y8 17+39	17	RT																																			
Y8 16+93	0	CL																																			
Y1B 12+91	12	RT																																			
L 66+82	34	RT	0816						24																												
L 66+82	50	RT																																			
L 68+42	22	RT																																			
L 71+23	18	RT	0817						24																												
SHEET TOTALS									100		8											284															
PROJECT TOTALS									656	532	140	96	92									1496	548		468	32		2760	472	356	60	44		644			

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO		15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	M.H. FRAME AND COVER STD. 840.54	ADJUST C.B.	15" DRAINAGE PIPE ELBOW		PIPE CLEANOUT EACH	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 62+73	0	CL																																											1				Exist. 18" CMP
L 67+02	33	RT	0781								1																										1			1									
		RT	0781	0775																																												41	
Y1B 12+40	19	RT	0782								1			1		1																																	
Y1B 12+91	12	RT	0782	0764																																												50	
L 68+28	20	LT	0801								1			1			1																																
			0801	0802																																													
L 69+50	19	LT	0802								1			1			1																																
			0802	0806																																													
L 69+78	42	LT	0806								1			1	1																																		
L 69+71	28	RT	0804	0803																																													
L 69+71	19	RT	0803								1			1		1																																	
			0803	0805																																												48	
L 11+19	22	LT	0436																																													11	
L 11+54	21	LT	0422	0436																																												56	
L 12+38	0	CL																																														69	
Y3 12+89	24	LT																																														73	
Y3 12+87	21	RT																																														19	
Y4 11+93	25	LT	0507																																														
Y4 11+65	26	LT																																														13	
L 28+06	0	CL																																														75	
L 29+36	40	RT																																														138	
L 30+45	39	RT																																														69	
L 31+58	37	RT																																														53	
L 35+83	42	RT																																														43	
RAB3 12+25	4	RT																																														30	
RAB3 12+03	7	RT																																														14	
RAB3 12+85	2	RT																																														35	
Y6 11+63	14	LT																																														22	
Y6 10+57	14	RT																																														24	
Y8 17+39	17	RT																																														85	
Y8 16+93	0	CL																																														35	
Y1B 12+91	12	RT																																														49	
L 66+82	34	RT	0816																																														
L 66+82	50	RT																																														53	
L 68+42	22	RT																																														17	
L 71+23	18	RT	0817																																														
SHEET TOTALS											6			5	1	2	2																				1			1					1			1122	
PROJECT TOTALS											147	83.0		122	33	41	49		2			17	17														6		2	8	2	4		1	43	1.2920		2035	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

COMPUTED BY: D. BROWN, PE DATE: 07-28-21
CHECKED BY: E. FERREIRA, EI DATE: 07-27-21

(12-17-19)

PROJECT NO.	SHEET NO.
U-5536	3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	500
				TOTAL LF:	500

*UD = Underdrain
*BD = Blind Drain
*SD = Subsurface Drain

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY			ASU (1)		500	1000	750		
			TOTAL CY/TONS/SY:		500	1000**	750**	0	0

*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)
*AST = Aggregate Stabilization
**Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Soil Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

DL-2X4GGY3,1/31/2024,C:\Users\nguyentt\Downloads\ROWParcels.xls

PROJ. REFERENCE NO.	SHEET NO.
U-5536	3P-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	TRIAD MUNICIPAL BEV. CTL. BOARD
1A	4	MARIA D. & DORSEY O. STIMSON
2	4	KENT CORP
2Z	4	KENT CORP
3	4	LOLA JONES KIGER
3Z	4	LOLA JONES KIGER
4	4	LOLA JONES KIGER
5	4	PMA I HOLDINGS, LLC
5	5	PMA I HOLDINGS, LLC
6	4	TOWN OF LEWISVILLE
6A	4	TOWN OF LEWISVILLE
6B	5	JAMES E PLUMMER & CANDYCE S BROWN
7	5	NICON PROPERTIES, LLC
7	4	NICON PROPERTIES, LLC
8	5	BOBBY RAY & GALE W. KEY
9	5	GUARDIAN ASSOCIATES LLC
10	5	THE MELVIN GREGG SHEETS REVOCABLE TRUST, ET AL
11	5	THE MELVIN GREGG SHEETS REVOCABLE TRUST, ET AL
12	5	TOWN OF LEWISVILLE
13	5	SOLOMON DEVELOPMENT LLC
14	5	STEPHANIE SURRATT
15	5	TOWN OF LEWISVILLE
15	5	TOWN OF LEWISVILLE
16	5	LEWISVILLE SHOPPING CENTER, LLC
16	6	LEWISVILLE SHOPPING CENTER, LLC
17	6	LANIER WILLIAMS REAL ESTATE LLC
18	6	LANIER WILLIAMS REAL ESTATE LLC
19	6	UNITED SAV.&LOAN ASSOC
20	6	CSL NORTH CAROLINA SYSTEM LP
21	6	PAULA BOLLIGER
21A	6	FORSYTH COUNTY
22	6	LEWISVILLE BAPTIST CHURCH
22Z	6	LEWISVILLE BAPTIST CHURCH
24	6	THIRD SQUARE, LLC
25	6	DAVID GLASGOW
26	6	GRACE J. SPAINHOUR F/K/A GRACE J. PHILLIPS
27	6	JOHN H SIMMONS
27A	6	MARK NORMAN AND WIFE, CATHERINE NORMAN
28	6	CAROLYN S SHORE, ET AL
28A	6	KATIE MARIE ROBERTS
29	6	DORSEY D. STIMSON, III AND WIFE, MARIA D STIMSON
30	6	STEVEN J. CROWELL AND WIFE, HOPE M. CROWELL
31	6	DORSEY D. STIMSON, TRUSTEE OF THE DORSEY D. STIMSON TESTAMENTARY TRUST
31A	6	DORSEY D. STIMSON, TRUSTEE OF THE DORSEY D. STIMSON TESTAMENTARY TRUST
32	6	DORIS B STIMSON
33	6	ANDREW P BOBOTSIARES
33	7	ANDREW P BOBOTSIARES
34	6	QUALITY OIL COMPANY, LLC
34A	6	TOWN OF LEWISVILLE
34A	7	TOWN OF LEWISVILLE
35	7	ANDREW P BOBOTSIARES
36	7	RICHARD STIMSON, ET AL
37	7	MICHAEL R & JULIE COLLINS
38	7	WEST BEND MASONIC LDG 434AF&AM
39	7	WESTBEND MASONIC LDG #434 TRST
40	7	J&K PROPERTY MNGMNT LLC
41	7	PHILIP F & CHRISTIE B SEVERINO
42	7	JOHN W OWEN
43	7	J&K PROPERTY MNGMNT LLC

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
44	7	J&K PRPRTY MNGMNT LLC
45	7	RYAN L REEDY & QUIRANTE D. A. DOSDOS
45	9	RYAN L REEDY & QUIRANTE D. A. DOSDOS
46	7	ESTATE OF MARTHA B. JENNINGS
46	9	ESTATE OF MARTHA B. JENNINGS
47A	9	DARRYL & MICHAEL JENNINGS
47B	9	MICHAEL B & KAREN Z JENNINGS
47C	9	LISA J. ROBERTSON AND HUSBAND, THOMAS W. ROBERTSON
48	7	MAPLE TREE INVESTMENTS LLC
49	7	THOMAS H FOWLER FAMILY LLC
53	7	LEWISVILLE UNITED METHODIST CHURCH
54	7	ESTATE OF DAVID E TAYLOR, SR.
55	7	WILLIAM W & GLORIA C LUCAS
56	7	TANYA M TISE & SANDRA M SPACH
56Z	7	TANYA M TISE & SANDRA M SPACH
57	7	BOBBY GENE HICKS AND BETTY HICKS TAYLOR
57Z	7	BOBBY GENE HICKS AND BETTY HICKS TAYLOR
57A	7	BOBBY GENE HICKS AND BETTY HICKS TAYLOR
58	7	SHARON C WARREN
58Z	7	SHARON C WARREN
58	8	SHARON C WARREN
58Z	8	SHARON C WARREN
59	7	WOOD LEWISVILLE CENTER, LLC
59	8	WOOD LEWISVILLE CENTER, LLC
60	8	BRIAR CREEK CONDOMINIUMS
61	8	ESTATE OF JAMES CHRISTOPHER SWEET
66	7	INOVATION PROPERTIES OF LEWISVILLE, LLC
66Z	7	INOVATION PROPERTIES OF LEWISVILLE, LLC
67	8	ROBERT J. RYAN AND WIFE, LINDA RYAN

PROJECT REFERENCE NO.	SHEET NO.
U-5536	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 033400 ENGINEER — 12/19/2024

HYDRAULICS ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 33246 ENGINEER — 12/19/2024

CDM Smith — CDM Smith Inc, 5400 Glenwood Avenue, Suite 400, Raleigh, NC 27612-3228, NC CDA No. F-1255

MI Engineering, PLLC, 1011 Schaub Drive, Suite 100, Raleigh, NC 27606, NC CDA No. P-0671

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

END PAVING
–Y2– POC STA. 12+49.56

1A — PCC Sta. 12+44.36

N 19° 51' 16.6" W

SPECIAL LATERAL 'V' DITCH SEE DETAIL 4B

CB MIN D — PC Sta. 11+02.94

OUTLET PROTECTION 2 TONS CL B RIP RAP 7 SQ GEOTEXTILE

END CONSTRUCTION
–Y2– POT STA. 13+05.00

STD 'V' DITCH SEE DETAIL 4A

OUTLET PROTECTION 2 TONS CL B RIP RAP 7 SQ GEOTEXTILE

PT Sta. 12+57.87

RCP–IV

CONCRETE MOUNTABLE ISLAND SEE NCDOT RSD 852.02

N 38° 06' 37.6" W
–L– POT Sta. 13+54.87 =
–RABT1– POC Sta.10+62.30

4 — PC Sta. 14+03.42

–Y2– POT Sta. 10+57.18 =
–RABT1– POC Sta.11+56.34

1 — MIN D DI — GRADE TO DRAIN — REMOVE — RETAIN

DO NOT DISTURB LIGHT POLE

N 62° 27' 35.1" E

POT Sta. 10+00.00

2Z — PUE — MIN D CB

BEGIN TIP PROJECT U–5536
–L– POT STA. 10+77.76

2 — 2Z — 3Z

–L– POT Sta.12+51.31 =
–RABT1– POC Sta.12+35.20

DO NOT DISTURB LIGHT POLE

–L– POT Sta.12+98.92=
–Y3– POT Sta. 16+46.87

SPECIAL BACK OF CURB CUT DITCH SEE DETAIL 4C

PT Sta. 16+30.44

–Y3– POC Sta. 16+00.87 =
–RABT1– POC Sta.12+90.39

3 — PCC Sta. 14+46.21

SPECIAL SHOULDER GRADING SEE CROSS SECTIONS

PC Sta. 13+90.32

REMOVE — 15" RCP–V — CB 0415 — +54.08 — 21' TYP. CONC

EXIST. DI

BEGIN PAVING
–Y3– POT STA. 12+30.98

TIE TO EXISTING — RETAIN — DO NOT DISTURB HISTORIC MARKER

POT Sta. 10+00.00

BEGIN CONSTRUCTION
–Y3– POT STA. 11+18.91

–L– POT Sta.13+06.01 =
–Y2– POT Sta. 10+00.00

N 4° 44' 20.5" W

PC Sta. 10+00.00
PT Sta. 13+26.72

6A — 3Z

SPECIAL BACK OF CURB CUT DITCH SEE DETAIL 4C

PARKING 8' WIDE (TYP.)

5' BIKE LANE

OUTLET PROTECTION 3 TONS CL B RIP RAP 11 SY GEOTEXTILE

OUTLET PROTECTION 2 TONS CL B RIP RAP 7 SY GEOTEXTILE

PT Sta. 17+55.86

S 79° 39' 14.5" E

PC Sta. 18+35.79

W2 ELBOWS

18" RCP–IV — 24" RCP–IV — 15" RCP IV

PT Sta. 20+65.19

5 — 6

STD 'V' DITCH SEE DETAIL 4D

SPECIAL BACK OF CURB CUT DITCH SEE DETAIL 4C

SPECIAL BACK OF CURB CUT DITCH SEE DETAIL 4E

N 76°58'02" E 102.82'

N 76°28'29" E 212.71'

RIP RAP — RETAIN — 60' CHL

8' CMP CONC RET WALL — SED POND — BL-7 — ISFBUS

24" VALLEY CURB — PAVED W/24"C&G — 48" CONC

CHL GATE

10' TEMPORARY CONSTRUCTION EASEMENT (SEE PB 60 PG 5)

10' PERMANENT EASEMENT (SEE PB 60 PG 5)

10' CONC. SIDEWALK — 2'-6" C&G — 13" RCP–IV

N 75° 41' 10.3" E

320' TAPER RT

7 — MATCH LINE –L– POT STA. 24+00.00 SEE SHEET 5

BL-8

NAD 83/NA 2011

AVERAGE DAILY TRAFFIC

2015 / 2040 ## IN 100'S NO. OF VEHICLES PER DAY (VPD)

–Y2– SHALLOWFORD RD. — 50/70 — N/A/11 — N/A/50 — 12/22 — 8/13

–L– GREAT WAGON RD. — 4/3 — N/A/33 — 46/82

–Y2– SHALLOWFORD RD.

GREAT WAGON RD./SHALLOWFORD RD.

NOTES:
1. REPLACE ALL EXISTING DRIVEWAYS WITH LIKE MATERIAL.
2. PROPOSED DRIVEWAY WIDTHS SHALL MATCH EXISTING DRIVEWAY WIDTH.
3. SEE SPECIAL PROVISIONS FOR TRUCK APRON STAIN & STAMP REQUIREMENTS.

–L–		–Y2–		–Y3–		–RABT1–
PI Sta 15+86.35	PI Sta 19+52.30	PI Sta 11+74.23	PI Sta 12+51.12	PI Sta 14+18.26	PI Sta 15+39.63	PI Sta 10+00.00
△ = 37° 53' 10.4" (RT)	△ = 24° 39' 35.2" (LT)	△ = 18° 00' 21.5" (RT)	△ = 0° 14' 59.4" (RT)	△ = 1° 01' 58.7" (RT)	△ = 23° 27' 25.6" (RT)	△ = 359° 59' 20.3" (LT)
D = 10° 44' 58.8"	D = 10° 44' 58.8"	D = 12° 43' 56.6"	D = 1° 50' 53.7"	D = 1° 50' 53.7"	D = 12° 43' 56.6"	D = 110° 11' 03.1"
L = 352.44'	L = 229.40'	L = 141.42'	L = 13.52'	L = 55.89'	L = 184.23'	L = 326.72'
T = 182.93'	T = 116.50'	T = 71.30'	T = 6.76'	T = 27.95'	T = 93.42'	T = 0.00'
R = 533.00'	R = 533.00'	R = 450.00'	R = 3,100.00'	R = 3,100.00'	R = 450.00'	R = 52.00'
e = 0.04	e = 0.04	e = NC	e = EXIST.	e = NC	e = NC	e = NC
RO = 84'	RO = 84'	RO = N/A	RO = N/A	RO = N/A	RO = N/A	RO = N/A
DS = 40 mph	DS = 40 mph	DS = 15 mph	DS = 40 mph	DS = 30 mph	DS = 15 mph	DS = N/A

LEGEND
- CONCRETE SW/DRWY/ISLAND
- CONCRETE TRUCK APRON

SEE SHEET 2B–1 FOR INTERSECTION DETAILS
SEE SHEET 2D–1 FOR DRAINAGE DETAILS
SEE SHEET 10 FOR –L– PROFILE
SEE SHEET 13 FOR –Y2– PROFILE
SEE SHEET 13 FOR –Y3– PROFILE
SEE SHEET 15 FOR –RABT1– PROFILE

SYSTIME = 5/14/99
USER ID: CONRADM

PROJECT REFERENCE NO.	SHEET NO.
U-5536	4A
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA SEAL 033400 ENGINEER — 12/19/2024 — Digitally signed by: TRAVIS L. FISHER

CDM Smith
CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC CDA No. F-1255

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83/NA 2011

MATCH LINE -L- POT STA. 24+00.00 SEE SHEET 5A

1A PCC Sta. 12+44.36
PT Sta. 12+57.87
PC Sta. 11+02.94
MARIA D. & DORSEY O. STIMSON DB 2183 PG 309 PB 23 PG 5
-Y2- POT Sta. 10+57.18 = -RABT1- POC Sta.11+56.34
1 TRIAD MUNICIPAL LT BEV. CTL. BOARD DB 3435 PG 324
POT Sta. 10+00.00
2Z KENT CORP DB 3208 PG 1473
2 KENT CORP DB 3208 PG 1473
-L- POT Sta.12+51.31 = -RABT1- POC Sta.12+35.20
-L- POT Sta.12+98.92= -Y3- POT Sta. 16+46.87
PT Sta. 16+30.44
-Y3- POC Sta. 16+00.87 = -RABT1- POC Sta.12+90.39
3 LOLA JONES KIGER DB 3074 PG 4009 PB 60 PG 15
3Z PC Sta. 10+00.00 PT Sta. 13+26.72
PCC Sta. 14+46.21
PC Sta. 13+90.32
N 29° 13' 44.8" W
4 LOLA JONES KIGER DB 3074 PG 4009 PB 60 PG 15
N 38° 06' 37.6" W -L- POT Sta. 13+54.87 = -RABT1- POC Sta.10+62.30
PC Sta. 14+03.42
5 PMA I HOLDINGS, LLC DB 3746 PG 893 PB 20 PG 149 PB 60 PG 27
PT Sta. 17+55.86
S 79° 39' 14.5" E
PC Sta. 18+35.79
PT Sta. 20+65.19
6 TOWN OF LEWISVILLE DB 3074 PG 361
N 75° 41' 10.3" E
7 NICON PROPERTIES, LLC DB 3441 PG 3143 DB 3766 PG 4380 PB 20 PG 149
TOWN OF LEWISVILLE DB 3269 PG 1277
TEXTURE SALON & GIFTS LLC DB 3068 PG 3830
LVMP, LLC DB 3487 PG 4319 PB 57 PG 162
MILLGENT PROPERTIES LLC PB 3001PG 1621
PSALM 91 PROPERTIES, LLC DB 2944 PG 3605 PB 57 PG 162
TOWN OF LEWISVILLE DB 2997 PG 1431
-L- POT Sta.13+06.01 = -Y2- POT Sta. 10+00.00
N 4° 44' 20.5" W
POT Sta. 10+00.00
-L- GREAT WAGON RD.
-Y2- SHALLOWFORD RD.
-Y3- SHALLOWFORD RD.
GREAT WAGON RD./SHALLOWFORD RD.

AVERAGE DAILY TRAFFIC
2015 / 2040 ## IN 100'S NO. OF VEHICLES PER DAY (VPD)
50/70 · 12/22 · 8/13 · N/A/11 · N/A/50 · 4/3 · 46/82 · N/A/33

-L-		-Y2-		-Y3-		-RABT1-
PI Sta 15+86.35	PI Sta 19+52.30	PI Sta 11+74.23	PI Sta 12+51.12	PI Sta 14+18.26	PI Sta 15+39.63	PI Sta 10+00.00
Δ = 37° 53' 10.4" (RT)	Δ = 24° 39' 35.2" (LT)	Δ = 18° 00' 21.5" (RT)	Δ = 0° 14' 59.4" (RT)	Δ = 1° 01' 58.7" (RT)	Δ = 23° 27' 25.6" (RT)	Δ = 359° 59' 20.3" (LT)
D = 10° 44' 58.8"	D = 10° 44' 58.8"	D = 12° 43' 56.6"	D = 1° 50' 53.7"	D = 1° 50' 53.7"	D = 12° 43' 56.6"	D = 110° 11' 03.1"
L = 352.44'	L = 229.40'	L = 141.42'	L = 13.52'	L = 55.89'	L = 184.23'	L = 326.72'
T = 182.93'	T = 116.50'	T = 71.30'	T = 6.76'	T = 27.95'	T = 93.42'	T = 0.00'
R = 533.00'	R = 533.00'	R = 450.00'	R = 3,100.00'	R = 3,100.00'	R = 450.00'	R = 52.00'
e = 0.04	e = 0.04	e = NC	e = EXIST.	e = NC	e = NC	e = NC
RO = 84'	RO = 84'	RO = N/A	RO = N/A	RO = N/A	RO = N/A	RO = N/A
DS = 40 mph	DS = 40 mph	DS = 15 mph	DS = 40 mph	DS = 30 mph	DS = 15 mph	DS = N/A

SEE SHEET 2B-1 FOR INTERSECTION DETAILS
SEE SHEET 10 FOR -L- PROFILE
SEE SHEET 13 FOR -Y2- PROFILE
SEE SHEET 13 FOR -Y3- PROFILE
SEE SHEET 15 FOR -RABT1- PROFILE

SYSTIME = 5/14/2025 15:36:15
USER: rfisher
D:\projects\U-5536_Rdy_psh_04A.dgn

5/14/99

NOTES:
1. REPLACE ALL EXISTING DRIVEWAYS WITH LIKE MATERIAL.
2. PROPOSED DRIVEWAY WIDTHS SHALL MATCH EXISTING DRIVEWAY WIDTH.

-Y10-
PI Sta 13+09.77
△ = 9° 55' 13.1" (RT)
D = 14° 19' 26.2"
L = 69.26'
T = 34.72'
R = 400.00'
e = NC
RO = N/A
DS = 15 mph

PROJECT REFERENCE NO.	SHEET NO.
U-5536	5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033400 — 12/19/2024
Docusigned by: [signature] SFF0D8E4E4E4E7...

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 33246 — 12/19/2024
Docusigned by: [signature] 24343D7B0D7D4A0...

CDM Smith — CDM Smith Inc, 5400 Glenwood Avenue Suite 400, Raleigh, NC 27612-3228, NC COA No. P-1255
MI Engineering, PLLC, 1011 Schaub Drive Suite 100, Raleigh, NC 27606, NC COA No. P-0671

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCH LINE -L- POT STA. 24+00.00 SEE SHEET 4

MATCH LINE -L- POT STA. 38+00.00 SEE SHEET 6

NAD 83NA 2011

PC Sta. 26+37.22
-L- POT Sta. 26+03.00 = -Y4- POT Sta. 13+75.77
N 75° 41' 10.3" E
PT Sta. 29+16.64
PC Sta. 13+76.50
POT Sta. 15+17.20
PT Sta. 14+72.66
POT Sta. 15+99.83
PT Sta. 13+44.31
END CONSTRUCTION -Y9- POC STA. 13+95.00
END CONSTRUCTION -Y10- POT STA. 13+76.19
N 9° 32' 06.2" E
N 26° 11' 26.5" W
N 26° 54' 02.0" W
N 27° 11' 36.1" W
N 36° 06' 39.6" W
N 64° 00' 00.0" E
BEGIN CONSTRUCTION -Y4- POT STA. 10+17.67
BEGIN CONSTRUCTION -Y9- POT STA. 12+15.00
BEGIN CONSTRUCTION -Y10- POT STA. 11+95.00
POT Sta. 10+00.00
PC Sta. 12+75.06
-L- POT Sta. 31+16.56 = -Y9- POT Sta. 13+21.78
-L- POT Sta. 35+74.48 = -Y10- POC Sta. 13+11.59

-L-	-Y9-
PI Sta 27+77.42	PI Sta 14+26.30
△ = 11° 41' 10.3" (LT)	△ = 36° 43' 42.3" (RT)
D = 4° 10' 55.8"	D = 38° 11' 49.9"
L = 279.43'	L = 96.15'
T = 140.20'	T = 49.79'
R = 1,370.00'	R = 150.00'
e = 0.03	e = EXIST.
RO = 96'	RO = N/A
DS = 40 mph	DS = 40 mph

AVERAGE DAILY TRAFFIC — 2015 ## NO. OF VEHICLES PER DAY / 2040 (VPD) IN 100'S
GREAT WAGON RD./TOM VOSS RD.
SHALLOWFORD RD./TOM VOSS RD.
GREAT WAGON RD./DAVID MCKEE ST.
GREAT WAGON RD./BELNETTE DR.

LEGEND
CONCRETE SW/DRWY/ISLAND

SEE SHEETS 2B-5 & 2B-6 FOR INTERSECTION DETAILS
SEE SHEET 2D-1 FOR DRAINAGE DETAILS
SEE SHEET 10 FOR -L- PROFILE
SEE SHEET 13 FOR -Y4- PROFILE
SEE SHEET 14 FOR -Y9- PROFILE
SEE SHEET 15 FOR -Y10- PROFILE

SYSTIME
USER: CPARVIN
FILE: U-5536_Rdy_psh_05.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5536	5A
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033400 DAVID L. HICKS
12/19/2024
SFFD0004744443
Signed by: DAVID L. HICKS

CDM Smith Inc.
5400 Glenwood Avenue
Suite 400
Raleigh, NC 27612-3228
NC CDA No. F-1255

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-Y10-
PI Sta 13+09.77
△ = 9° 55' 13.1" (RT)
D = 14° 19' 26.2"
L = 69.26'
T = 34.72'
R = 400.00'
e = NC
RO = N/A
DS = 15 mph

-L-	-Y9-
PI Sta 27+77.42	PI Sta 14+26.30
△ = 11° 41' 10.3" (LT)	△ = 36° 43' 42.3" (RT)
D = 4° 10' 55.8"	D = 38° 11' 49.9"
L = 279.43'	L = 96.15'
T = 140.20'	T = 49.79'
R = 1,370.00'	R = 150.00'
e = 0.03	e = EXIST.
RO = 96'	RO = N/A
DS = 40 mph	DS = 40 mph

NAD 83NA 2011

MATCH LINE -L- POT STA. 24+00.00 SEE SHEET 4A

MATCH LINE -L- POT STA. 38+00.00 SEE SHEET 6A

PC Sta. 26+37.22
-L- POT Sta. 26+03.00 =
-Y4- POT Sta. 13+25.77

POT Sta. 15+17.20

PT Sta. 14+72.66

PC Sta. 13+76.50

PT Sta. 29+16.64

POT Sta. 15+99.83

PT Sta. 13+44.31

POT Sta. 10+00.00

-L- POT Sta. 31+16.56 =
-Y9- POT Sta. 13+21.78

-L- POT Sta. 35+74.48 =
-Y10- POC Sta. 13+11.59

PC Sta. 12+75.06

5 PHILIP R. STEELMAN & TERESA STEELMAN DB 1701 PG 1807

6B TOWN OF LEWISVILLE DB 1956 PG 3148 DB 2098 PG 1813 PB 64 PG 186

11 MELVIN G SHEETS REVOCABLE TRUST; MELVIN G SHEETS TRUST; JACQUELINE S HARRELL; PAMELA G SHEETS DB 3749 PG 2205 DB 2849 PG 3143 DB 616 PG 161

11 MELVIN G SHEETS REVOCABLE TRUST; MELVIN G SHEETS TRUST; JACQUELINE S HARRELL; PAMELA G SHEETS DB 3749 PG 2205 DB 2849 PG 3143 DB 616 PG 161

13 TOWN OF LEWISVILLE DB 3742 PG 1519 DB 2461 PG 26 DB 2498 PG 4076 DB 2498 PG 4079 PB 16 PG 179

14 STEPHANIE SURRATT DB 3351 PG 2946 PB 16 PG 179

12 TOWN OF LEWISVILLE DB 1934 PG 2347

16 LEWISVILLE SHOPPING CENTER, LLC DB 3507 PG 2412

16 LEWISVILLE SHOPPING CENTER, LLC DB 3507 PG 2412

7 NICON PROPERTIES, LLC DB 3441 PG 3143 DB 3766 PG 4580 PB 20 PG 149

9 GUARDIAN ASSOCIATES LLC DB 3295 PG 2361 PB 64 PG 186

8 BOBBY RAY & GALE W. KEY DB 3295 PG 2332 PB 64 PG 186

10 MELVIN G SHEETS REVOCABLE TRUST; MELVIN G SHEETS TRUST; JACQUELINE S HARRELL; PAMELA G SHEETS DB 3749 PG 2205 DB 2849 PG 3143 DB 3778 PG 3002 DB 616 PG 161

15 TOWN OF LEWISVILLE DB 1934 PG 2347

PHILIP R. STEELMAN & TERESA STEELMAN DB 1701 PG 1807

SYLVESTER KING, MARISSA KING, MATTHEW MARCUS, & EMELIA MARCUS DB 3754 PG 3899 PB 16 PG 179

KELLY JO-ELLEN MERCER LONG DB 3566 PG 572 PB 19 PG 125

JEREMY DONALD BRADFORD & ABIGAL HEPLER BRADFORD DB 3509 PG 3836 PB 16 PG 179

OLIVER J. GRIMES, SR & BILLIE GRIMES DB 1442 PG 78 PB 29 PG 38

PMA 1 HOLDINGS, LLC DB 3760 PG 2171 PB 80 PG 21

TEXTURE SALON & GIFTS LLC DB 3068 PG 3830

WAKE FOREST UNIV. BAPTIST MEDICAL CTR DB 3063 PG 4400 DB 3063 PG 4403 DB 3063 PG 4406

SOLOMON DEV. LLC DB 2267 PG 2740

CHARLIES DAVID HAUSER, MICHAEL DEAN HAUSER, & MARK WILLIAM HAUSER, AS TENANTS IN COMMON DB 3761 PG 1426

FORSYTH COUNTY DB 2680 PG 486

SHALLOWFORD RD. (SR 1008) 36' PAVED W/ 30' CURB

GREAT WAGON RD. (SR 1136) PAVED

NORTH ST. (SR 1128) PAVED (VARIES)

DAVID MCKEE ST. (PAVED VARIES)

BELNETTE DR. (PAVED VARIES)

BRANCH

DITCH

AVERAGE DAILY TRAFFIC
2015 ## NO. OF VEHICLES PER DAY
2040 (VPD) IN 100'S

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